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INDIAN RAILWAYS

DESCRIBED;

THE GOVERNMENT CONTRACT

EXPLAINED:

WITH

A MAP, AND THE CONTRACT IN FULL.

BY

JOHN WHITEHEAD,

OF THE STOCK EXCHANGE, LONDON;

AUTHOR OF "GUARANTEED SECURITIES, THEIR MERITS AS INVESTMENTS CONSIDERED,"
"THE KEY TO RAILWAY INVESTMENTS," &c., &c.

LONDON:

PRINTED FOR, AND TO BE HAD OF, THE AUTHOR ONLY, AT
MESSRS. J. & J. WHITEHEAD'S, 8, MOORGATE-STREET, E.C.

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In Preparation,

A NEW EDITION OF MR. WHITEHEAD'S WORK,

GUARANTEED SECURITIES :

THEIR

MERITS AS INVESTMENTS CONSIDERED.

BY

JEFFERY WHITEHEAD,

OF THE STOCK EXCHANGE, LONDON.

THIS Edition will be brought up to the end of the year 1861, and contain an accurate description of all the Guaranteed and Preference Securities of the different Companies (Railway &c.) of the United Kingdom. The work itself will be ready for circulation as early in 1862 as possible. Orders will be received by Messrs. J. & J. WHITEHEAD, Stock and Share Brokers, 8, Moorgate-street, E.C., London.

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INDIAN RAILWAYS,

ETC., ETC.

THE ignorance which prevails respecting the constitution and merits of Indian Railways (recently increased by studied misrepresentations), would alone justify the publication of any work which had in view the dissemination of reliable information respecting them, though the millions of English capital which have been subscribed for these great works, and the systematic attempts referred to, to damage them in public estimation, as investing *media*, did not encourage such purpose.

Prompted by the above considerations, this work has been undertaken, and that the most accurate information may be furnished, official or other trustworthy sources have alone been sought, for reference or otherwise.

The contract entered into between the Government and the Companies will be found *in extenso* in the Appendix—such marginal notes only being added as may lead to the more easily comprehending its conditions. As a whole, the contract appears to be perfectly fair, inclining, if to either side, to that of the Companies.

That the Government has retained the control of the expenditure in its own hands should surprise no one who estimates

the heavy responsibility it has undertaken, not only in guaranteeing 5 per cent. interest to the capital, but in seeing that India is thrown open at all points to the benefits of railway communication, on the easiest and most practicable terms.

Though, as a rule, Government interference with public companies is justly deprecated in this country, in India, as far as railways are concerned, such power is protective of the distant shareholder, no works or outlay of any kind being permitted without previous approval being obtained. The judicious application of this preventive right will keep down the capital expenditure (the shareholders' true question) at its lowest. This supervision and control are furthermore justified on the ground that the cheaper railways are now constructed in India, the greater and more certain will be their early success and future extension. English capital will not be advanced in aid of future railways, if the lines now on the eve of completion do not prove commercial successes.

The natural desire of the Government being to advance the interests of existing lines, that competition which has injured railway property in England need not be apprehended in India, nor can those causes of damage to Indian Railway Stocks arise which have worked so detrimentally to the primary shareholder in English lines, in the shape of preference share engagements.

Contrasting Indian Railways in the matter of cost of construction with a few English, Irish, and Scotch lines, it will be seen that in the main they stand the test very much to their advantage, and that they possess that primary element of success (cheapness of works) in a degree which shareholders in English railways may indeed envy ; and it may be here observed that the Indian companies not undertaking a given work for a stated sum, are not bound, should the original estimate be exceeded, to find any further capital that may be required to complete it, and would not do so unless the terms of issue were agreeable to them.

The following examples will elucidate the important point of cheap construction :*

Miles of own Railway.	Railways.	Average Cost per Mile of Railway.	Remarks.
English {	648 London and North Western . .	£ 47,176	These figures are only approximates to accuracy, the Companies' accounts not giving the data to render them with exactness.
	234 Great Northern . .	44,110	
Scotch {	219 Caledonian . .	41,405	
	183 $\frac{3}{4}$ Glasgow and South Western . .	25,279	
Irish {	330 Great Southern and Western of Ireland . .	15,877	
	192 $\frac{1}{2}$ Midland Great Western of Ireland .	13,280	
Indian {	1137† East Indian . .	18,250	These results are worked out from Mr. Danvers' Reports, and the Companies' accounts.
	850 Madras . .	10,000	
	1266 Great Indian Peninsula . .	9,479	
	309 $\frac{1}{2}$ Bombay and Baroda	11,308	
	114 Scinde . .	13,158	
	250 Punjab . .	9,000	
	78 $\frac{1}{2}$ Great Southern of India . .	7,007	
	29 Calcutta and South Eastern . .	11,379	
	110 Eastern Bengal . .	12,727	

Having shown in the question of cost of construction that Indian Railways hold an enviable position, and, furthermore, that they possess within themselves other elements of prosperity, it is proposed to submit a few remarks on the

* The English are lines having at the least double tracks of rails ; the Indian, to a great extent, are single lines, and would require an outlay of at least £3000 per mile to make them double throughout. This cost will not, however, be incurred until the traffic shall become so great as to necessitate it.

† The whole capital has been estimated to have been increased £3,000,000 by the Santhal rebellion and the Indian mutiny (£2638 per mile).

guarantees which have been given by the Indian Government.

Besides the Railway Guaranteed Five per Cent. Stocks—a favourite stock exists, called the “India Five per Cent. Stock”—transferable at the Bank of England, in the same manner as Consols. This stock stands at the present time (the Dividend added) equal to £105 $\frac{1}{4}$ per £100 stock: the Railway stocks (also including the Dividend)—the East Indian Railway stock at £100 $\frac{3}{4}$ per £100 stock; the Great Indian Peninsula, Par; the Bombay and Baroda, £98 $\frac{1}{2}$; and the Punjab, £97 $\frac{1}{2}$; the guaranteeing body and the guaranteed rate being in each case the India Council and five per cent. It is true, that the cost attending the purchase and transfer of the Railway stocks is £1 per cent. over that of the India Five per Cents. This, however, if no other disturbing quality exist, justifies only that difference between the two.

The conditions under which both classes stand are as follow:—

The India Five per Cent. Stock.

1. Five per cent. per annum is guaranteed to it, payable out of the revenues of India.
2. At any time after 5th July, 1870, the Government possess the right to redeem the stock at par, on one year's previous notice being given.

The Railway Stocks.

1. The engagements the Companies have entered into are to endure for a period of ninety-nine years, from the date of the respective leases, unless previously vacated under the reserved powers.
2. The Government guarantee five per cent., on certain conditions set forth in the contract, on all the capital paid into the Indian Treasury, and expended with

Government approval, the revenues of India being the pledge.

3. The five per cent. interest paid to the Proprietors, with simple interest added, is to be refunded by the respective Companies to the Government, out of one-half the profits realised in excess of five per cent., the other half going to the Shareholders, all profits made prior to the completion of each line being applied to the credit of this interest account. When the whole interest debt has by this means been expunged, then all the surplus profits are to pass to the Shareholders.
4. If the profits are not sufficient to meet the five per cent. guaranteed, the Government will make the deficiency good; but if the working expenses should prove greater than the total gross traffic, then the amount short earned would have to be made up out of the Guaranteed Interest Fund; and the Shareholders would, in such event, receive so much less than five per cent. as the amount of the short earning trenced on the total of the guarantee fund. If the latter were all so swept away, so would the dividend be—the obligation the Government is under being simply to provide sufficient means to cover the sum total of the guarantee, but not to make good any loss in working the line too.*
5. The Companies have the right to surrender the works, &c., to the Government after any part of the line has been opened three months—six months' prior notice of such intention being required. This would necessarily be the course which would be followed if the lines were worked even at a partial loss, for the Companies would never suffer their five per cent. to be frittered away in working expenses. In the event of surrender being made, all monies

* This point is illustrated in an extract from Mr. Slaughter's "Railway Intelligence," in the Appendix (page 64).

which had been expended with the Government approval would have to be repaid to the Companies, or an equivalent annuity granted.*

6. The Government has the right, if notified within six months of twenty-five or fifty years respectively, to possess itself of the railways (one or all), paying for the same at the mean market value the stocks maintained in London the three previous years.
7. The Government can take possession of any line which may not be completed or worked satisfactorily, repaying within six months the sums which have been properly expended.
8. At the expiration of the ninety-nine years the land reverts to the Government, if the Railway Companies shall not before then, under the powers they are vested with, have surrendered the lines. The Government would, in the case of such reversion, have to pay for the engines, carriages, and other railway plant at a valuation, the proceeds being the only sum that would then be divisible amongst the Shareholders.
9. The Government in the events of surrender or purchase have the right, in place of repaying the capital at once, to pay an annuity to each Shareholder, to be reckoned from the time when the gross payment is due, and to continue the same during the residue of the ninety-nine years—the rate of interest of such annuity being the average that India Government securities may have borne in London for the two years which preceded the granting the annuity.

To make this perfectly plain, the following illustrations will be sufficient :—

1. Suppose the average rate five per cent.—the sum to be

* On this point Mr. Danvers, the now Official Railway Director, in his Report of 1859, explains that the Government "would have to repay the whole amount that has been expended, with their sanction, on the undertaking."

met £1000.—In this case, the annuity having seventy-five years to run, the annual payment would be £51 5s. 2d.—the present value £1000.

If the annuity had fifty years only to run, the annual payment would be £54 15s. 6d.—the present value £1000.

2. Suppose the average rate four per cent.—the sum to be met £1000.—In this case, the annuity having seventy-five years to run, the annual payment would be £42 4s. 7d.—the present value £1000.

If the annuity had fifty years only to run, the annual payment would be £46 11s. 0d.—the present value £1000.

Each of these annual payments, spread over the periods stated, is equal to receiving four per cent. on £1000 in perpetuity, that sum being rendered back for re-investment at the end of seventy-five or fifty years, provided the excess of annuity over £40 is year by year for either period laid out at compound four per cent. interest. Thus £2 4s. 7d., and its annual accumulations so laid out every year would in seventy-five years produce £1000—so £6 11s. 0d. in fifty years.

The Shareholder will be paid for his Stock, not at the par* price of issue, but at the value it may possess under the arrangement; and if prosperity attend the Companies, this may amount to a large excess—thus, if the original Stock of £1000 should be declared to be of the value of £1500, then the £42 4s. 7d. would, in effect, become £63 6s. 10d.; and the £46 11s. 0d. in effect also would become £69 16s. 6d., the reproduction of the £1500 depending on the excess over £60, being in either case placed out at four per cent. compound interest, for the respective periods the annuities may exist.

10. The Government has the power to reduce the rates and tolls when ten per cent. is realised by the Shareholder, only, however, to keep up that rate, but not to reduce it.

* This cannot be under par unless the Companies fail to surrender, a most unlikely contingency. If paid half-yearly the annuity would be rather less than the sums stated.

The power is permissive, not peremptory, and may not be used, and even if used, the effect might be so to add to the profits from increased trade as perforce to keep the dividend, not at, but far above ten per cent.—this rate is not the limit of profits, but only the point at which Government may intervene. In explanation of this much misrepresented power, Mr. Danvers in his Report of 1859 states, “In the event of the profits exceeding ten per cent., the Government can order a reduction in the rates, but not to such an extent as to bring the net receipts below ten per cent. on the capital.”

So far in explanation of the arrangements which exist between the Government and the Five per Cent. Stockholders (India and Railway).

The dividends on all the Stocks are made up to 30th June and 31st December in each year, and paid early in the following months, the India Five per Cents. being met at the Bank of England on personal application, the Railway Stocks by dividend warrant sent by post to every Shareholder.

In drawing attention to the difference in price of stocks, which rest on one and the same basis for security, it is with no wish to lower either for the purpose of raising others; on the contrary, it is considered that all of them in their simple five per cent. character merit a far higher price than they at present command.

If the contradictory values pointed out apply with any force as between the India Five per Cents. and the ordinary stocks of the Railway Companies, how much more do they to the convertible debentures of the latter bodies, which have the same Government promise to pay to rely on? Furthermore, the holders, in some of the issues, at the end of five years from the date of their creation, have the right in themselves, as it may at the time suit their purpose, to keep the loan open, at five per cent., for a further term of five years. These debentures are transferable from hand to hand by endorse-

ment (a great advantage), and the interest is collected half-yearly by coupons which are attached to them. There exists, likewise, another class of Debentures, transferable by deed, which possess, during their currency, a right of conversion into the stock of the issuing Railway Company, at any time after twelve months from the date of issue. This valuable privilege gives to these Debentures a superior value over the mere Loan Debentures.

That the Contract between the Government and the Railway Companies should undergo the usual twisting, torturing, and misconstruing which legal deeds must endure, is not to be regretted, and provided such criticisms are fairly and honestly made, would never be complained of. Whether this instrument has been so honourably considered, the reader will judge from the following remarks, which apply to some pamphlets on the subject, which have created, from the boldness of their statements, much anxiety amongst the Shareholders in Indian Railways.

The ingenuity of one exponent of the contract is seriously taxed to make out a case under Clause 12, which binds the Companies to maintain the railways, even at the cost of the whole of the guaranteed interest for the time being, if the lines should prove so unproductive as to call for such expenditure, as if the Companies would await such a calamitous result, to put in force the power of surrender and repayment of capital secured by Clause 21. To this easy relief the candid writer makes but casual reference, preferring that the Shareholder should suppose that because the railway, as a paying property, was a failure, his whole capital was in jeopardy, than which, except by the most improbable supineness in the Companies, nothing can be more untrue.

Again, Clause 21 is wholly misrepresented in its intent; it is commented on, and emphasised by italics, to lead the reader to suppose that the interest debt would constitute such a "charge" on the Companies as would entitle the Government,

in the event of surrender, to deduct its total from the capital, to be then repaid, than which, as will be shown presently, nothing can be more erroneous.

The commentator proceeds to remark: "No doubt the Government undertakes to purchase the railway or other work when required to do so." Then follows this misrepresentation : "But it provides that the line or work shall previously be put into the most perfect state of repair at the expense of the Shareholders, and that all losses which occurred in working the line, AND ALSO ALL SUMS ADVANCED AS INTEREST, SHALL BE DEDUCTED FROM THE PURCHASE MONEY." And to give greater force to this latter falsification, makes the further addition, "and the works are held as security for this repayment" !! How or where in the Contract this double mis-statement is justified it would not be possible to discover.

Other clauses, with a few unimportant errors in them, are quoted ; but Clause 21 has been so mis-stated, as to justify the republication of that part of it under which the pamphleteer has ventured to enunciate (professedly as a guide and warning to the Shareholders) his most unjust conclusions. The subject of the clause is the "surrender" of the line.

PART OF CLAUSE 21 FROM THE
CONTRACT.

"And thereupon the covenants hereinbefore contained for payment of interest shall cease as from the day upon which the said line of railway and works are to be surrendered and accepted ; and all claims by the Secretary of State in Council, on account of interest, on the said Railway Company in respect of the said line of railway shall also cease, and the Secretary of State in Council shall be at liberty to retain, out of any monies

PART OF CLAUSE 21 FROM THE
PAMPHLET.

"And thereupon the aforesaid covenants for payment of interest shall cease as from the day upon which the East India Company shall be bound to accept the said railway and works, and all claims by the East India Company on account of interest, or otherwise, on the said Railway Company shall also cease except that the [the following appears in italics] *East India Company shall be at liberty to retain, out of any monies pay-*

payable to the said Railway Company, the amount of all claims and demands of any sort then existing against the said Railway Company on their revenue account in respect of their said railway, and which shall not be shown to have been fully satisfied and discharged : Provided always that," &c. &c.

able to the said Railway Company, the amount of all other claims or demands of any sort existing against the said Railway Company on their revenue account in respect of their undertaking, and which shall not be shown to have been fully satisfied and discharged until the same shall have been satisfied and discharged. Provided also that," &c. &c.

If the above extracts be compared one with the other, the difference between them will quickly be detected, not only in the words but their force. The extracts are stated in the pamphlet to be from a "Blue-Book published in 1859," of which the author in his innocence observes, "their existence is scarcely known to the public at large, and it is only within the last few days that I became aware of the accessibility of such information." Now that this not over particular writer knows where Blue-Books are to be obtained, it is to be hoped if he again appears in print, he will at least make his extracts with correctness. The Blue-Book the true clause is taken from is Mr. Danvers' Report of 1859, to the Secretary of State for India, and is doubtless the "Blue-Book" the author alleges he has quoted from.

The reimbursement of the interest debt, it is clear under Clause 18 of the contract, is confined to one-half the profits obtained over 5 per cent. If no surplus profits should arise during the period of the lease, the debt to the last would remain unredeemed. The Government, under this Clause, having elected to be repaid out of surplus profits, to these alone must they look, should the evil day ever come when the Railway Companies determine to pass the lines over under Clause 21. The Government cannot in this particular have a lien on the Company's capital, and a hold on profits too; they have barred themselves from such right, and, according to the

official explanation given by Mr. Danvers, they do not possess it. It will be observed that in this particular clause (21) a mutual deed of release on this interest account, of payment to the one, and of claim by the other, is to be executed in the event of surrender; proof sufficient that "claims" on both sides would then become defunct.

It has further been boldly stated that the Government have forced on the Companies an unfair condition, in stipulating that the military and their necessary accompaniments of horses, stores, followers, &c., shall be conveyed at low fares in superior carriages, the assertor being as ignorant as he was of "Blue-Books" being accessible, that the same provision is contained in every Act of Parliament affecting English railways, and that no trains thoroughly filled with such traffic pay better than military trains do.

Again, it has been attempted to induce the public to believe that the Steam Company, which forms so essential a link in the Scinde Railways, has had such onerous conditions put upon it, as to make the undertaking of necessity a losing concern, whereas the per centages of profits which, under the contract, are to be set aside to meet the insurance and maintenance of the vessels constituting the fleet, together with the repairs, are such only as every prudently conducted steam-vessel company does or should set aside for such purposes. The risks attending steam-ships in navigating any waters are ever great, possibly greater in India than elsewhere, and require necessarily reserve funds to be created to cover them. What would have been said of the Government if it had not insisted on these provisions being made in the case of the "Indus Steam Flotilla?" The not over precise objectors would then have denounced the authorities for having omitted to do that which they now blame them for having done! If the risks be great, so may the profits; if, however, the Indus Steam Flotilla prove an exception, then the Company has the same remedy of sur-

render the Railway Companies possess, and so the objections fall objectless.

The great question of surplus profits accruing stands forward next for consideration, and on this most interesting point much information of a very favourable character will be found in Mr. Danvers' Report, extracts from which are given in the Appendix.

The most encouraging features that Indian Railways present in relation to this matter are the following:—

1. Cheapness of construction.
2. An enormous population* to draw on as passengers, consumers, and producers.
3. The expansion which trade must experience as the railways penetrate their respective districts.
4. The absence of parallel lines, those now nearly completed becoming, therefore, the great railway arteries of India.

If we now proceed in further elucidation of this surplus profit inquiry, by taking the mileage necessities of Indian railways to produce given results, and compare them in the same way as has already been done with the mileage costs of the English undertakings then quoted, it will be seen how favourably they bear this test, and what a hopeful margin prevails in favour of the Indian lines. Furthermore, if the same average receipts should be secured in India which have been in England the most extraordinary results cannot fail to arise.

The contrasts which follow respecting the English lines are as close approximations to accuracy as can be made with the insufficient data in hand. Those of the Indian lines are made from official materials.

The annexed statement shows the average receipts per mile

* The population of India under British rule is estimated at 135,442,911 ; the area in square miles being stated as 851,038. The dependent States have a united area of 625,278 square miles, and a population of 50,465,366.—*Parliamentary Return*, 1859.

per week of some of the railways of the United Kingdom, with the Dividends realised on the Original Stocks, in the half-year to 30th June, 1861, and of the requirements of the Indian Railways to cover the Guarantee:—

Revenue earning miles.	Railways.	Rate of last dividend per cent. per annum.	Average per mile per week of the gross receipts.	Rate per cent. of working expenses.
1004	London and North Western	3 $\frac{3}{4}$	79	48·42
308	Great Northern . . .	3 $\frac{3}{4}$	79	55·89
219	Caledonian . . .	5	68	41·30
183 $\frac{3}{4}$	Glasgow and South Western	5	43	40·33
330	Great Southern and Western of Ireland .	5	24	47·62
192 $\frac{1}{2}$	Midland Great Western of Ireland . . .	5	18	43·01
1137	East Indian . . .	Average gross receipts per mile per week required to cover the 5 per cent. guaranteed.	35	The working expenses are taken at 50 per cent.*
850	Madras . . .		19	
1266	Great Indian Peninsula .		18	
309 $\frac{1}{2}$	Bombay and Baroda . .		22	
114	Scinde . . .		25	
250	Punjaub . . .		17	
78 $\frac{1}{2}$	Great Southern of India		13	
29	Calcutta & South Eastern		22	
110	Eastern Bengal . . .		24 $\frac{1}{2}$	

Taking into consideration the rights the Companies possess under the contract, and the encouraging comparisons the foregoing statement establishes — furthermore, taking one glance at all the Indian Railways in their guaranteed character only, it is clear that, as regards the dry 5 per cent.,

* This rate will not be far wrong when the different railways are completed and in systematic working order. The Electric Telegraph appears to be a source of great loss at present—in the year ending 30th June, 1861, the East Indian showed a deficit of £8331 ; the Great Indian Peninsula, £2718 ; the Madras, on the year 1860, £326.

each stock in money value is of equal worth. Looking, however, at the surplus profit chances they possess, there can be no doubt that some of them have greater hopes of sooner realising such results than others ; it is not, however, intended here to offer an opinion as to which is likely to prove the most productive, for possibly that which has cost the most, or the least, may yield the largest profit.* Whether, however, a line costs £20,000 or £10,000 per mile is a matter of too much moment not to form an ingredient in the chances of 10 per cent. being realised at an early period. The element of cost of construction must exercise its influence, no matter whether the heart of India be penetrated from Calcutta, Bombay, Madras, or Kurrachee.

Again, a short line, from its greater economy and ease of management, may, with inferior expectations, prove a better paying property than one of greater length and larger resources ; the longer line, from its extent, becoming difficult of control in its details, and more costly in its expenditure than the shorter one. That length in railways is not necessarily strength, has been amply proved in those leading English undertakings, which, as they have grown in extent, have miserably diminished in their dividend-paying quality.

The foregoing remarks are monitory only to the investor, and in no degree intended to cast the smallest doubt on the future of any of the great Indian Railways : for it may be found with them that that control over details (all of which is profit), which has not been attained in England, may be in India.

Those lines which, from the small amount of their expenditure, and the early closing of the capital accounts, have but a moderate debt on interest account to meet, will necessarily, if the traffics work to good profit, be freed of that incumbrance, and become entitled to *all* the surplus profits sooner

* As far as the partial openings have hitherto gone, they show most in favour of the most costly (the East Indian) line. The latest account exhibits a gross receipt of £21 per mile on one week's receipts (Sept. 1861).

by far than those Companies can calculate on which have a heavy interest account to provide for.

The following is a general statement of this interest account to 31st December, 1859, as it appears in Mr. Danvers' Report of 1860. The gross charge against the East Indian and Great Indian Peninsula and Madras Companies had been reduced on 30th June, 1860, by £880,331, that being the profit made on those lines up to that date. The probable total gross addition to this account for the year 1861, allowing £500,000 as the profit credited, would, in round numbers, be £1,500,000.

Railways.	Gross Total due by each Company to 31st December, 1860.	Remarks.
	£	
East Indian	2,736,059	} Subject to profit allowances as explained above.
Great Indian Peninsula . .	1,207,828	
Madras	778,092	
Eastern Bengal	55,544	
Calcutta and South-Eastern	14,042	
Great Southern of India .	19,169	
Bombay and Baroda . .	232,412	
Scinde	159,420	
Punjaub	73,403	
Indus Steam Flotilla . .	23,740	

The East Indian Company's accounts to 31st December, 1860, show a net debit of £2,172,075 on interest account; the Madras, to the same day, £602,070; the Bombay and Baroda, to 30th June, 1861, £274,821. The other Companies do not render a general interest account, the Directors confining themselves to half-yearly statements.

The carriage of coal will become an item of considerable value to those Companies whose lines are in direct connection with, or proximity to, the great coalfields of India. Unfortunately, this important article is confined to the Ranee-gunge portion of the East Indian line, the Nerbudda part of the

Great Indian Peninsula, and the valley of the Indus portion of the Scinde line ; the first, by its branch to Raneegunge ; the second, by its passing through the Nerbudda valley ; and the last to within 28 miles of its terminus at Kotree. The importance of the possession of coal cannot be overrated, whether for the coke it will furnish cheaply to the railways themselves, or for its commercial value as an article of carriage. Those Companies stand at a disadvantage which have no such treasure available, being compelled to burn wood, or import coke, for locomotive purposes, at a cost which must necessarily tell against them in the working of their lines ; the difference may not amount to anything of serious importance, nevertheless, the non-possession of coal must be a disadvantage—its possession a gain.

The subjoined extract from the "Friend of India" gives interesting information on this question. The whole article is too long for insertion.

" Over the vast peninsula, which has an area of 800,000 square miles, coal is found only in the valley of the Ganges and neighbouring hills, in Rewah to the south of the Soane, in the Nerbudda valley, and in the Sylhet hills on the far north-east. There is no workable coal elsewhere in the North-Western Provinces, none in Oude, the Punjab, Scinde, Bombay, or Madras.

" The consumption of coal in India and by vessels leaving its ports we may estimate at 700,000 tons annually, the amount imported in 1857 from England being 329,157 tons. Reckoning the price of Indian coal in Calcutta at 5 annas a maund, or 17s. a ton, and English coal at the same rate (though it is far higher), we have more than £500,000 sterling spent on coal every year in India. As the trade and manufactures of India increase, and as machinery comes to be more and more largely introduced, indigenous coal will become more important. The fact that the supply is in certain districts inexhaustible, and that the demand is annually in-

creasing, is one full of hope for the coal companies and proprietors who already occupy or, like the Bengal Coal Company, monopolise the field. It is possible the Nerbudda fields, worked by the company just established, may supply Bombay and the southern portions of the North-Western Provinces on the completion of the railway. But Oude, the Punjab, and Madras must still look to their forests, which, on both sanitary and commercial grounds, it becomes daily of more importance to utilise and renew.

"The following abstract contains the result of Mr. Oldham's inquiries:—

THE QUANTITY OF COAL RAISED.

Districts.	1858.	1859.	1860.
Raneeunge coalfield	5,917,000	8,949,600	8,559,097
Rajmahal Hills .	219,000	843,000	1,222,860
Kurhurbari . .	4,000	108,182	275,256
Palamow . .	—	28,648	30,900
Sylhet Hills . .	22,319	32,498	—
Total in maunds .	6,162,319	9,961,928	10,088,113
Or in tons . .	226,140	365,575	370,206

These figures show the healthiness of the trade, which, notwithstanding the local fluctuations, has steadily progressed. In the Raneeunge coalfield, which is now tapped by the East Indian Railway, and which will shortly be pierced by two branches, there were last year 49 collieries, with 27 steam-engines at work. This is the result of little more than 20 years' operations."*

The table which follows shows the extent of the population in the districts cited.

* According to the last half-yearly statements published, it appears that whilst the East Indian line, which has coal at hand, expended only 4·52 per cent. of its gross earnings for fuel, other railways having no such resources at present available expended—the Bombay, 9·12; the Great Indian Peninsular, 17·60; the Madras, 19·67 per cent.

British Territories from Parliamentary Returns.	Area in square miles.	Population.	Population per square mile.
			Not including Native States.
Madras	136,872	23,301,697	170
Bombay	140,407	11,837,654	84
Bengal and Fort William	253,000	40,852,397	161
North-Western Provinces	108,000	30,250,000	280
Punjaub	90,258	14,913,001	165

Col. R. Baird Smith's Report to the Government in India (May, 1861), on the serious depression of trade which had arisen between Calcutta and the North-Western Provinces, is of general interest. He satisfactorily shows that the great want of India is good roads, or water communication, and that with these there is no reason why the consumption of Manchester goods should not be increased beyond all ordinary calculation; and if this view applies with force to Bengal, how much more must it apply and will it tell in those populous, soon to become railway, districts which, as far as cheap and ready communication with the seaboard is concerned, are now practically cut off from it.

The whole Report is of especial interest to the Manchester manufacturer, and of sufficient practical value to the railway shareholder to justify a few extracts.

The Report holds out great encouragement to Manchester interests, and these cannot advance without railways also benefiting. The opening up of new roads is strongly urged, as a certain means of laying bare sources of demand and supply hitherto untouched. A remarkable illustration is given of what may be expected when an interchange in commodities can be carried on cheaply between one district and another, in the case of Oude, which transported at a necessarily heavy cost a large amount of grain into the famine districts, and in return took away such an amount of salt from Agra, Muttra

and Delhi, as it is estimated will increase the local revenue from that article from 80 to 90 per cent. over the previous year. If this were done by means of the present wretched roads between such distant points, and at an immeasurably greater cost than railway carriage would amount to, how much more good will be effected when the at present suspended Oude Railway is revived and constructed ?

The following are extracts from the Report, the subject of the foregoing remarks :—

“ The course of my inquiries has led me to visit the following important trade marts, namely, Mirzapoor, Allahabad, Benares, Cawnpore, Lucknow, Furruckabad, Agra, Muttra, and Delhi. In connection with the trade in Piece Goods, Mirzapoor and Furruckabad are marts of the first rank ; Lucknow, Allahabad, Cawnpore, Agra, and Delhi, are of secondary importance ; while Benares and Muttra are linked to the question as being the seats of large banking firms and the centres of large money transactions.

* * * * *

“ Those best qualified to supply me with trustworthy information on the point, assure me that the total Imports of what are ordinarily spoken of as Manchester Goods are distributed between the Lower and Upper Provinces of Bengal, in the proportion of about 9-16ths to the former, and 7-16ths to the latter. In different estimates kindly prepared for me, the greatest allowance for the North-West Province marts was 8-16ths, and the smallest 6-16ths. I have therefore assumed the mean of 7-16ths as a fair and reliable measure of the Manchester Goods trade in these Provinces, so far as Calcutta is concerned. The goods so supplied permeate all the districts of the Provinces with a vigour mainly determined by the facilities of transport ; and, although on the Western Frontiers there is a tract of country on which the streams of trade from Calcutta and Bombay meet and mix, making it a sort of debateable land between the two great sources of supply, it may be confidently assumed that a

population of not less than about 30 millions have been, and must continue to be, supplied with Manchester Goods from Calcutta only."

* * * * *

" Few causes act more directly on the free spread of Manchester Goods than communications of any kind. It is along the best of these that English cloths have most largely commended themselves to the people, and the interest of the manufacturing districts of England is most direct and personal in the state of the roads and rivers of India."

* * * * *

" The chief consumers of English cloths here are all classes near to open and easy lines of communication, be they by land or water; a comparatively small section of agriculturists being the upper grades of the class at a distance from such communications; a very large proportion of the inhabitants of towns and cities everywhere, and of course the whole of the European community. The mass of the agricultural and the poorer non-agricultural classes have scarcely yet become the customers of Manchester at all, though it is merely a question of time and internal improvements of roads and rivers when they shall become so."

* * * * *

" These districts are not average ones, and I have not yet been able to procure corresponding data from others in less fortunate positions, from which a tolerably reliable average might be deduced. But on the strength of considerable personal knowledge of a large number of the districts concerned, of their means of communication, the material condition of their people, and the circumstances generally that would influence the growth of the Manchester Trade within their limits, I am inclined to believe that less than one-third of the field open to its operations has as yet been taken possession of, and I am confident that, when the comparative plenty of ordinary seasons is restored, and the march of internal improvement can be re-

sumed, there lies before the trade a growth as steady, and perhaps even more rapid than it has previously known."

* * * * *

"In December, 1860, and, indeed, in February, when I had an opportunity of seeing the rivers, they had almost ceased to be means of communication at all."

The following extract from "The Englishman," of September 14, on the Cotton Capabilities of India* (a question of railway as well as manufacturing interest), will well repay perusal.

"In Dharwar, the Raipore Doab, and Western Berar, on one side of India; in the North-West, and some parts of Bengal on the other; great efforts are being made, and not unsuccessfully, very greatly to extend the cultivation of cotton this season. What the result will be lies yet within the womb of futurity. It is not a question of price which will influence increased cultivation, at least not so far as the cultivator himself is concerned; cotton pays him as well as any other crop he can raise on the same soil. The difficulty lies in the great risk of transport to the coast, and the expense attendant thereon. These are the great drawbacks to the production of cheap cotton in India, and it is to the improvement of the communications between the coast and interior, and thereby lessening the risk and expense of transport, that the Cotton Supply Association and those interested in its produce must turn their undivided attention and exert their best energies. With these difficulties overcome there is no reason why India should not produce as good and as cheap cotton as the slave states of America. Moreover, in the districts whence cotton is derived, Manchester may establish the additional market for her wares she so much requires. The same ways, whether

* The recent concession made by Lord Canning in his capacity of Viceroy, to allow land to be purchased and held by Europeans and Natives in perpetuity, must in course of time have a marked influence on the Cotton and Agricultural question of India.

rail, canal, or river, by which cotton will be drawn from the places of its growth, will convey into the interior the produce of Manchester mills, and, provided she can produce coarse fabrics of a quality similar to the native home-spun cloths, and sell them to the ryot at a low figure, Manchester need fear no dearth of cotton; the entire yield of the cotton fields of India will be at her disposal.

"The Punjab, with its five rivers, all affording means of speedy and safe transport, appears to possess great advantages for the cultivation of cotton. It numbers among its various works of public utility very heavy irrigation works, which, for the production of cotton of the finer staples in a climate such as that of the Punjab, are highly desirable, if not absolutely requisite. It has a numerous agricultural population, and is admirably administered—the former a *sine quâ non*, the latter most advantageous—when capital has to be invested in the soil, and advances made for the fruits it has yet to yield. In the past year, 1860-61, the cotton produced in the several divisions of the Punjab and its dependencies amounted to 43,316,800lb., of which about 4,000,000lb. found their way to the coast. The quantity therefore absorbed in the country itself was in round numbers 39,000,000lb., a very large portion of which might with good management and a judicious outlay of capital, have been taken in exchange for the products of Manchester mills, instead of being devoted as it was to the manufacture of cloths, which Manchester ought to be able to supply at a figure which should defy competition on the part of any native hand looms. The Lieutenant-Governor gives it as his opinion that the production of cotton might be indefinitely increased, but that to this end it will be necessary for English speculators to have their agents in the country ready to pay at once for the crop, and to give directions regarding the method of cleaning it; he further adds that it is his belief that a greater breadth of cotton has been sown this year than last."

The descriptive particulars of the Indian Railways which follow are taken from Mr. Danvers' Reports to the Secretary of State for India, and the Companies' half-yearly statements. The deductions from the figures, &c., so collected, are the writer's.

The gauge of all the Indian Railways is uniformly 5 feet 6 inches ; the earthworks, cuttings, bridges, tunnels, &c., being made suitable for a double line. With the exception of a very small extent the present lines are single.

BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY.

This line commences at Bombay, and, proceeding onward through Surat and Broach to Baroda, terminates at Ahmedabad, on the Gulf of Cambay. It is intended ultimately to be extended to the East Indian line at Agra.

The especial immediate object is to connect Bombay with the great cotton districts of Guzerat.

The general character of the country the line will traverse is low and flat, and subject, consequently, to inundations in the rainy seasons. The works are so constructed as to meet this inconvenience.

The line is $309\frac{1}{2}$ miles in length, of which 132 (Doolia to Bulsar, including the Nerbudda Viaduct) are now open—to this, 23 further miles northward to Neriad will shortly be added. On the half-year's traffic to 30th June last, a net profit of £6057 was made, out of a gross receipt of £15,570. The return to 20th October shows a more agreeable aspect, the passengers having advanced 201·67 per cent. in numbers, the goods 268·32 in weight, on an increased mileage of only 62·96 per cent.—the comparisons standing against the 81 miles of February last.

The Government right of purchase will first arise in the year 1880.

The average cost per mile, taking the estimated capital of £3,500,000 as the guide, would be £11,308.

To cover the 5 per cent. which is guaranteed to the £3,500,000, the Company must earn a gross sum of £6730 per week, or £22 per mile per week, the working charges being taken at 50 per cent. Every increase of £1346 per week, or £4 8s. per mile per week, should add at least 1 per cent. to the dividend.

The Directors, in their Report (28th June last), state that a native Prince (the Guicowar of Baroda) proposes to execute a line of twenty miles at his own cost, to run from Meagaum to Dhubdoe, which is intended to be completed by the next cotton season, and will form a very important feeder to the line. This good example, it is hoped, may be followed by the application of local capital to the formation of tramways into other districts, to intersect and serve the rich agricultural and cotton country through which the railway runs.

The Directors also state that the merchants profess their willingness to pay double the present rate of charge ($1\frac{1}{2}$ per ton per mile) by country boats for railway transport, owing to "the saving of time, security from peculation, and damage by sea-water, which would be gained, and which they estimate would more than compensate for such extra charge."

The Directors further state that the advices from India "continue to confirm the anticipation of a large traffic."

CALCUTTA AND SOUTH-EASTERN RAILWAY.

This line is at present limited to the district between Calcutta and the Mutlah River, in the estuary of which a commodious port, with all necessary wet docks and other works, will be constructed.

The Company rely for their real present success on the port of Mutlah attracting the shipping preferably to Cal-

cutta, that reliance being based on the crowded state of the Hooghley, its dangerous navigation, and the saving of time which will be made by stopping short at the new port.

The line is a short one of twenty-nine miles, and is expected to be completed by the end of this year (1861).

The estimated Capital is £330,000, or an average cost of £11,379 per mile.

To clear the 5 per cent. guaranteed to the capital, the working charges being taken at 50 per cent., will require a gross weekly traffic of £634, or £22 per mile per week, to be earned. Every addition of £130 per week should add 1 per cent. at least to the dividend.

The Government right of purchase will first arise in the year 1884.

The course of the line to Sonapore, eleven miles from Calcutta, is reported by the Directors to pass through a densely populated district, from which traffic in aid must necessarily be obtained.

The works on the line are represented to be easy, the country being a dead level.

EASTERN BENGAL RAILWAY.

This line commences at Calcutta and terminates at Kooshtee, opposite Pubnah, on the River Ganges, at which point its purpose is to intercept the large traffic intended for Calcutta, to convey it by rail there, and enable merchants to send their goods from thence by rail, and so save the dangers and delays which affect the navigation of the Soonderbunds. Kooshtee is the present terminus ; it is, however, contemplated, sooner or later, to extend the line to Serajgunge and Dacca. The districts this extension would serve are rich in the production of indigo, seeds, sugar, oils, rice, and other grain, the

population being thickly placed, equal to 500 to the square mile.

The line, as at present laid out, is a single one of 110 miles in length, and is expected to be completed in May, 1862.

The total cost is estimated at £1,400,000.

The Government right of purchase will arise in 1883.

The works, according to the estimated total, will cost on an average £12,727 per mile.

To clear the 5 per cent. guaranteed to the capital of £1,400,000, the Company must earn a gross weekly sum amounting to £2695, or £24 10s. per mile per week, the working costs being taken at 50 per cent. Every increase of £539 per week, or nearly £5 per mile per week, should add at least 1 per cent. to the dividend.

The Directors, in their Report (May, 1861), state that the works will be completed within the capital. It appears further that the Indian Government have applied themselves zealously to the improvement of old and the construction of new roads, which, when completed, will act as important feeders to the railway, and so "increase the large prospective local traffic." This is reiterated in the Report of November, 1861.

EAST INDIAN RAILWAY.

This undertaking embraces a line from Calcutta to Delhi, with branches to Raneegunge, the Barrackur River, and the Singarron Valley; also a line from Allahabad to Jubbulpore, to unite with the Great Indian Peninsular Railway from Bombay. The total mileage is 1364 miles, being 1137 the main line to Delhi and branches, and 227 the Jubbulpore branch at present postponed.

The line starts from the right bank of the Hooghley at Calcutta, proceeds to Burdwan, on to Rajmahal on the Ganges; thence to Allahabad, at the junction of the Rivers Ganges and

Jumna. The latter river is there crossed, and Cawnpore, which has a short branch to a wharf on the Ganges, reached ; the line then strikes across the Dooab to within twenty miles of Agra (which city is served by a branch), proceeding to Allyghur, and on to its terminus at Delhi.

The Raneegunge branch opens up the great coalfield of that district, and will unquestionably *per se* become a source of great profit. Hereafter this branch will be extended to Patna, bringing that city one hundred miles nearer to Calcutta than it will be by the existing Trunk Line, and, with other contemplated branches, open up the immense intervening coal formations which are known to exist in the locality.*

The Jubbulpore junction with the Great Indian Peninsular Railway will connect Calcutta and Delhi with Bombay and Madras.

But one tunnel (of 900 feet) exists throughout the line. The rivers have offered formidable obstacles to the engineer, and proved, in the necessary bridges, &c., very costly to the Company. The country being subject to great inundations in certain seasons, has necessarily presented engineering difficulties.

The Government right of purchase will first arise in February, 1874, for the main line.

For the Jubbulpore branch, which will have its separate capital account, and in no financial respect be mixed up with the Trunk Line, the right of purchase will arise in April, 1883.

The total estimated capital is £23,000,000, from which £2,250,000, the cost of the Jubbulpore branch, must be deducted, leaving £20,750,000 as the cost of the main line, or £18,250 per mile.

It is stated that the Santhal rebellion and the mutiny have

* This is referred to as of future importance in the Blue-book on the "Moral and Social Progress" of India, printed by order of Parliament (1861), one coal company alone having offered to guarantee 200 tons daily for twenty-one years at the usual rates charged.

directly and indirectly added £3,000,000 to the total cost of this railway, or £2638 per mile.

To make a profit of 5 per cent. on the capital of £20,750,000, this line must earn £39,795 per week, or £35 per mile per week, allowing 50 per cent. for working expenses. Every addition of £7959 per week, or £7 per mile per week, should add at least 1 per cent. to the dividend.

The line is expected to be open throughout by the end of 1862.

The average gross receipts per mile per week, on the half-year ending 30th June, 1861, exceeded £24, a most encouraging and satisfactory result, with an incomplete railway.

The Ganges and other navigable streams will necessarily always command a traffic. This, as in the canals of this country, will soon be confined to heavy cumbersome commodities, to which low rates are necessary, and time of no moment. Gradually, however, the railway will attract the traffic which can with profit be transmitted by it, and this, its greatest bulk, will gradually but certainly quit the rivers, &c.,—during those periods of the year when these are barely navigable, the railway will take to itself all the traffic which must be moved.*

THE GREAT INDIAN PENINSULAR RAILWAY.

This line commences in the island of Bombay, and proceeds inland thirty-three miles to the town of Callian, where it bifurcates, one branch taking a north-easterly, and the other a south-easterly direction. By the former it goes to Asseerghur,

* "An Old Indian Postmaster" states that cargo-boats take between twenty and thirty days to reach Calcutta by the Ganges from Rajhmal—before the railway opened, by Dâk (post) from Calcutta to Benares, five days on the journey, cost £25; by Palky, a month, £15. By water forty days were taken up, the cost from £15 to £25. Steamers during three months perform the voyage in ten days, twenty days being required for the other nine months of the year.

and hence to Jubbulpore, where it joins the East Indian branch to Allahabad. By the South-Eastern route it passes to Poonah, and on by Sholapore towards Madras, the junction line with which railway is postponed for the present. An important branch diverges from the North-Eastern main line at Bhosawul, near Nusseerabad, passing through the great cotton district of Oomrawuttee to Nagpore. There is also a branch from Bombay to Mahim ($1\frac{3}{4}$ of a mile), and a temporary line of seven miles from Padusdhurree (where the main line commences the ascent of the Bhore Ghât) to Campoolie, a village on the old road from Bombay to Poonah.

The entire length of the line is 1266 miles.

The railway is laid out to establish speedy communication between the three Presidencies, and to connect the great cotton and grain-producing districts of Central India with the port of Bombay.

The railway encounters great physical difficulties in its course from the mountains which separate Bombay from the Deccan : the section by the North-East having to make its way by the Thull Ghât, at an elevation of 1912 feet above the level of the sea ; that by the South-East by the Bhore Ghât, having an elevation of 2037 feet to master.

The Thull Ghât incline has for about $4\frac{1}{2}$ miles a gradient of 1 in 37, and a tunnel of 1962 yards. This short length of 9 miles will, it is estimated, cost £449,882, or an average of £49,988 per mile.

The Bhore Ghât is 14 miles in length, with an average gradient of 1 in 48. The steepest gradient for $1\frac{1}{2}$ miles is 1 in 37 ; the tunnelling is about $1\frac{1}{2}$ mile. The cost of this part of the line is estimated at £674,632, or an average of £48,188 per mile. So it appears that 23 miles of this line of railway will cost £1,124,524, thus carrying the general average up considerably (£880 per mile). Besides these stupendous works, the line has several rivers of considerable magnitude in its course to bridge over; for-

tunately good natural foundations of rock exist for the bridges to rely on.

The total cost is estimated at £12,000,000, or £9478 per mile. The Directors, in their Report of April, 1861, state that £11,000,000 will suffice: this would reduce the mileage cost to £8688.

To clear the 5 per cent. guarantee on the £12,000,000 capital, the Company must earn a gross weekly sum of £23,077, or £18 per mile per week, taking 50 per cent. for working expenses. Every increase of £4613 per week, or under £4 per mile per week, should add 1 per cent. at least to the dividend.

Should the cost be but £11,000,000, then a gross receipt of £21,346 per week, or nearly £17 per mile per week, will be sufficient to cover the guarantee.

The Government right of purchase first arises in August, 1874.

The average gross receipts per mile per week on this line, from 1st January to 30th June, 1861, amounted to £15—a very encouraging result on a railway which is not only without its middle portion at work, but has had to bear the heavy cost of transporting, at railway rates, all the merchandise it carried over either section of its line, by the mountainous intervening roads, to the other section. The net return, owing to these heavy drawbacks, and the very low rates of carriage, was unsatisfactory. The Company have, by Government orders, been carrying the lowest class of passengers at $\frac{2}{8}$ ths of a penny, and the third-class at $\frac{3}{8}$ ths of a penny, per mile. As an experiment, these rates will not be fairly tried until the communication is through. Judged, however, by English rules, they would appear to be cast on too low a scale.

Should Bombay become the chief European commercial port for the interior of India, a vast traffic must flow over this line, and thence to those districts on the East Indian

and Madras lines, which can be more cheaply reached from Bombay than from Calcutta or Madras.

The existence of coal in the Nerbudda Valley, through which this line passes, must prove a valuable possession to this Company; whether viewed in its simple coke and coal quality, or in that of the traffic it must ultimately induce. The line passes close to the pits of the Nerbudda Coal Company, and coal not only exists in large quantities, but is reported to be of a very superior description, and will be eagerly sought after for domestic, steam, and manufacturing purposes.

The line is expected to be completed throughout in April, 1863; the last part will be that portion between Oomrawuttee and Nagpore (120 miles), otherwise 1862 is stated to be the period when the other sections will be finished.

GREAT SOUTHERN OF INDIA RAILWAY.

This line is hereafter to be extended; at present it is confined to the country between Negapatam, on the coast, to Trichinopoly.

The country is stated to be very favourable for railway operations. The purposes the line is laid out to serve are to provide outlets for the large agricultural produce raised along its course, the whole neighbouring country being under cultivation. Rice and cotton are extensively grown, and native manufactures, in the shape of silk, cotton, and muslin goods, produced in great quantities.

The railway is $78\frac{1}{2}$ miles in length, and is no doubt open throughout, the Directors, in their Report, of 23rd April, 1861, having held out such expectation.

The estimated capital is £550,000, or an average cost of £7000 per mile.

To clear the 5 per cent. guaranteed to this capital, the working charges being taken at 50 per cent., will require a gross weekly

traffic to be earned, amounting to £1058, or £13 10s. per mile per week. Every addition of £211 per week, or £2 14s. per mile per week, should add at least 1 per cent. to the dividend.

The right of purchase by the Government will arise in the year 1883.

The completion of the line within a period a little over two years is highly to the credit of the executive.

The expectations regarding this line are best explained in the following extract from a communication made to the Government by Sir Charles Trevelyan, the late Governor of Madras :—“ My next point was Negapatam, the terminus of the Tanjore and Trichinopoly Railway. I never saw a district where a railway was so certain to be immediately and extensively useful. I met hundreds of carts and carriage bullocks labouring towards the coast, whose work will hereafter be done by the railway ; and they will be employed in extending the influence of the railway to the neighbouring districts. Negapatam, where the rail terminates in the sea, is, therefore, certain to become a place of great importance, and we should make the necessary preparations while there is time.”

The harbour of Negapatam is undergoing alteration by the Government, so as to make it commodious in all respects.

INDUS STEAM FLOTILLA COMPANY.

This Company has been sanctioned, and its capital of £250,000 guaranteed 5 per cent., as in the case of the railways, the purpose being to construct and place on the Indus a fleet of 53 vessels, of which 7 are passenger, and 6 towing steamers ; 33 are cargo barges, and 7 accommodation flats—all being for the purpose of carrying passengers and merchandise, at all periods of the year, between Kotree, the

upper terminus of the Scinde Railway, and Moultan, the starting point of the Punjab Railway.

The importance of this link in the railway communication between two such districts as the Punjab and the rising port of Kurrachee, at all periods of the year, whether the Indus be a swollen or a shallow stream, cannot be disputed, nor can the consequences of failure be disguised. There are, however, no misgivings in the officials of the Company—the operations of such of the vessels as have been on trial being reported satisfactory. The extent of the navigation undertaken is 570 miles, and is calculated to occupy $4\frac{1}{2}$ to 5 days. If the traffic should very largely increase between the two river termini, it is clear that the line of communication, before many years pass away, will have to be completed by railway, which may be termed the certain—to the exclusion of the river or uncertain—means of communication. The flotilla can be indefinitely enlarged, if in practice it should be found to be necessary and desirable to do so.

The Government right of purchase will arise in 1884.

The improvement which will follow the completion of the railway from Kurrachee, and the perfect working of its steam flotilla adjunct, will be to reduce the down trip from the twelve days, and the up trip from the twenty-five days the Government steamers now occupy on the voyages, to an average of about five days. The voyage by native craft occupies from thirty-five days to six weeks with the stream, and fifteen weeks against the stream.

The Directors, in their Report of 30th September, 1861, make the following remarks:—"With regard to the working expenses of the flotilla, the superintendent has made a careful estimate of the expenditure and earnings of each class of boat. Applying this estimate of receipts and expenditure, it will be found that a net revenue of £61,855 will be derived from the flotilla service, when all the boats are in working order, which shows a return of £18 per cent. upon the capital

of the undertaking. This return, of course, depends on all the vessels proving efficient."

The annual charge on account of interest amounts to £12,500, profits are also in the contract made liable to 10 per cent., and 7 per cent. deductions for insurance, maintenance, &c. When these proper charges have been set aside, the balance will constitute surplus profits. The estimated 18 per cent. is speculative.

The Company will have to erect repairing shops of their own, having now to send to England to make good any serious damages to the machinery.

MADRAS RAILWAY.

This line commences at Madras, and proceeds in a westerly course to Arconium, where it bifurcates and goes forward by one branch south-westerly to Beypore; by the other north-westerly through Cuddapah and Bellary, where the junction with the Great Indian Peninsula line to Bombay will be effected. From the south-western portion two branches strike off—one to Bangalore, the other to the foot of the Neilgherries.

This series of railways has been laid out for political and social purposes—connecting Madras with the military and sanatory stations at Bangalore and Ootacamund—establishing railway communication with the Bombay and Calcutta Presidencies—developing the country generally, and opening up a channel by which the produce of the Cuddapah and Bellary districts may be readily conveyed.

The general character of the country is favourable for railway operations, the chief engineering works being bridges over the many rivers the railway in its course has to pass over.

The entire length of these lines is 850 miles; the total cost is estimated at £8,500,000, or an average of £10,000 per mile. This amount will, it is stated, not all be required.

To meet the 5 per cent. guaranteed to this capital, the working expenses being taken at 50 per cent. a gross sum per week amounting to £16,346, or £19 per mile per week, must be earned. Every increase of £3269 per week, or £4 per mile per week, should add 1 per cent. at least to the dividend.

The average gross receipts per mile per week earned in the year ending 30th June, 1861, amounted to £9 7s. 3d., the smallness of which is well explained by the Directors in their Reports of May and November, 1861. These explanations will be found stated in a subsequent paragraph, together with other like matter.

The gross receipts of 1860-61 compared with those of 1859-60 show an increase, but the mileage take of the former year was but £487, against £623 for the latter year. The working expenses, which in 1859-60 amounted to 61·59 per cent., had mounted up to 76·25 per cent. in 1860-61.

The unsatisfactory results obtained from the traffic were, to a large extent, brought about by a cause which the Government having agreed to amend (a too low scale of charges); some improvement may certainly be hoped for from the higher tariff, which came into operation 15th September last.

The reduced charges took effect in 1859, and quickly brought down the receipts per train mile from the previous 6s. to 4s. 5½d. in June, 1860; 3s. 10d. in December, 1860; and 4s. 3d. in June, 1861.

The proportion of third-class passengers in 1859 amounted to 98¾ per cent. of the whole; in the half-year ending 30th June last, the proportion was 98·69 per cent. The first class then numbered 1382, with £854 earned; the second class 5286, with £1099 earned; the third class 503,597, with £20,220 earned (91·19 of the total receipts).

The conveyance of goods, &c., so far as the up-trade was concerned, had been disappointing, owing to the failure of the crops, and the subsequent spread of famine, cholera, and other like distressing causes:—to these should be added the enhanced

price the Company have had to pay for coke and coal, the heavy cost of maintenance (to continue for some period yet), from the failure of the wooden sleepers, and substitution of iron. The present partial openings touching no real sources of traffic afford no criterion as to what, with a complete system, they may reach. Wood is now being used in place of coke and coal.

On the other hand, in the transport of cotton, dry grains, oil, firewood, and salt, an increase is noted : of the last, 11,654 tons were carried in the half-year to June, 1861.

The establishment of a four-horse coach from the Tripatore station to Bangalore is noted.

These points are referred to and explained, that the present unsatisfactory working may not operate with unfairness on this and the other Indian lines. The Directors in their Report in May last very justly state, that no fair or useful conclusion can be drawn from the Company's present traffic operations.

With the line completed and open throughout—remunerative rates adopted—the traffic which still keeps on the road secured to the rail, and those new roads opened which the Government have approved and will make, all of them important feeders to the line, a very different return to that now made will assuredly be shown.

The Directors state in their November Report, that 263 miles were then open, and that the line from one coast to the other would be completed by the end of 1861, or beginning of 1862.

The Government right of purchase of the western line will arise in December, 1880—the Bellary line in August, 1883.

PUNJAUB RAILWAY.

This railway embraces a line from Moultan, on the Indus, to Lahore and Umritsir inland. The line is 250 miles in length, and passes through a country of a very favourable character, between the Ravee and Sutlej rivers. Besides this, another line is in course of survey, which, when approved, will be carried down to Delhi, where it will unite with the East Indian Railway, and so form an unbroken communication between the Punjaub and Calcutta, with Bombay by the Jubbulpore branch, and Madras by the Great Indian Peninsular and Madras lines. The capital for this further line will be guaranteed 5 per cent., under the same terms as all the other lines. The importance of its formation a glance at the map will show; that it will be pushed forward with all due vigour when the strain on the Government on account of the present lines is lessened, there can be no doubt.

The capital of the Punjaub Railway from Moultan to Lahore and Umritsir is £2,250,000.

The Government right of purchase will first exist in 1884.

The average cost per mile will be £9000.

To clear the 5 per cent. guarantee on the £2,250,000 of estimated capital, the Company must earn a gross weekly sum of £4327, or £17 per mile per week, the working cost being taken at 50 per cent. Every increase of £865 per week, or £3 10s. per mile per week, should add at least 1 per cent. to the dividend.

On this line the Punjaub Government, reporting respecting it in 1856, states—"The northern terminus of this line will be Umritsir, which is not only the first mart in the Punjaub, but also one of the first commercial cities in Upper India. Its merchants have dealings not only with all parts of India, but also with many parts of Europe on the one hand, and of central Asia on the other." After describing the rich products which seek the emporium of Umritsir, the report

estimates the then trade as equal to £3,500,000 per year, all of which it is alleged would seek the port of Kurrachee; besides which it is stated that there is a large existing traffic which the railway would at low rates attract to itself. The natural capabilities of the country are largely dwelt on, and characterised as capable of the most extensive and profitable development. The average of travellers since good roads were made between Lahore and Umritsir is estimated at 1000 per day, and "whereas, six years ago (1850), there were not 20 ekkas (small one-horse vehicles carrying two or three persons), there are now some 250 running daily between the two cities." "A similar passenger traffic would doubtless spring up between Lahore and Moultan." The country is described in this Report as most favourable for a railway; cheapness of construction being especially dwelt on as necessary to success, low rates being essential, and attainable only on a railway so completed. The Report adds, of this railway, that "it will give birth to a new commerce yet undeveloped, will be carried out with unusual facility, will prove financially profitable in a high degree, will vitally concern the best material interests of twenty-one millions of industrious people, and will conduce more than any other circumstance that could be named to the future prosperity of the Punjab."

SCINDE RAILWAY.

This undertaking is a compound one, being made up of three projects—1. The Scinde Railway; 2. The Indus Steam Flotilla; 3. The Punjab Railway—all of them being managed by one and the same (the Scinde) Board of Directors. Though these undertakings are so constituted, each has to rely on its own independent resources for its returns, separate capital, and revenue accounts being kept precisely as if the

Companies were under distinct boards. The general scheme is a chain of three links, the railways being dependent for absolute success, as through projects, on the middle link, the Indus Steam Flotilla.

The line proceeds from Kurrachee, a very important and rising port at the mouth of the Indus, and terminates at Kotree, opposite to Hyderabad. Its length, including a branch to Ghizree Bunder, is 114 miles.

The chief engineering works are bridges and viaducts (some of them being of considerable extent), an embankment across the valley of Dorbejee (constructed to protect the line from injury by inundations), and the wharf and steam ferry at Kotree.

The progress of the works was much impeded at one period from circumstances quite without the control of the Company. The railway, nevertheless, was the first of all the Indian railways completed throughout; it was opened for traffic 13th May, 1861. Owing, however, to damage to the earthworks from the unusually heavy rains which set in soon after the opening, the line was closed against traffic for a few days.

The Government right of purchase will arise in 1880.

The total capital for the complete formation of the line is estimated at £1,500,000.

The average cost per mile will be £13,158.

To clear the 5 per cent. guarantee on the £1,500,000 capital, the Company must earn a gross weekly sum of £2884, or £25 6s. per mile per week, the working cost being taken at 50 per cent. Every increase of £570 per week, or £5 per mile per week, should add 1 per cent. at least to the dividend.

Coal has been discovered within twenty-eight miles of Kotree, a matter of great import to the future of this line and its sister undertakings. A branch line will doubtless be constructed at an early period to the district where the coal-field lies, five miles to the east of the Erie Hills.

Kurrachee appears to be a port of great capacity, the trading to and from which has been of a gradual, but year by year im-

proving value. The table of exports and imports for the year 1843-44 gives £122,160 as their then value, that of 1858-59 £2,584,400.

The capabilities of the country the railway serves—for the production of cotton, silk, wool, corn, oil, seeds, saltpetre, indigo, madder, and other dye stuffs—are said to be without limit.

The Directors state in their report of 30th September, 1861, that since the line was opened “the quantity of goods delivered by native traders for carriage was much beyond the resources of the railway”—that the river boat traffic had stopped at Kotree—that native traders at Tatta had proposed to raise funds for a cheap railway, or tramroad, from that place to the line at Jooingshaie—that a large local traffic from that place to Kurrachee had commenced—that a direct trade between Kurrachee and London, Liverpool, Glasgow, Havre, the Mauritius, Calcutta, Bombay, and the Persian Gulf had been established—that the passenger traffic, though of the cheap class, was encouraging, and finally, to meet the daily increasing wants, the carrying stock was being got ready in time for the active trade which sets in in September.

Having drawn attention to all the leading points connected with these great national undertakings, and endeavoured to answer every objection which has been made to the Government contract, it remains only to invite attention to the interesting extracts from Mr. Danvers' official Reports, which will be found in the Appendix—to turn the thoughts of the reader to the great moral and commercial revolution which the introduction of railways especially must effect in India—to beg from him a calm review of the contract, every word of which he may rely has been correctly rendered—and, as a last word, to express a hope that the publication of this work may induce confidence to spring up where others have studiously scattered the seeds of distrust—decision where hesitation has been en-

couraged—and, finally, to place Indian Railways in that high position as investments, which they undoubtedly merit and are entitled to hold.

The map which accompanies this work, though on a small scale, will give a very accurate notion of the course the different railways take, and being the same as that appended to the Blue Book so often referred to, may be assumed to be accurate in all respects.

It is due to my son and partner in business I should state that the idea of this work is his entirely, that he collected the materials from which it has been compiled, and, having so done, passed them over to me, in the belief that my older experience in such matters would enable me to fashion them into better shape than he could hope to effect. I am not so satisfied, however, now that the end has been reached, that his earlier sketch would not, when amplified, have proved the better work; the merit of the idea, at least, is his, the demerits of its realisation—mine.

JOHN WHITEHEAD.

LONDON,

8, Moorgate Street, E.C.,

Dec., 1861.

APPENDIX.

THE following highly interesting extracts are taken from Mr. Danvers' lucid Report on Indian Railways, made to the Secretary of State for India (1859-60).

The first extract applies to the profits made on the opened mileage exceeding the 5 per cent. guaranteed to the capital employed (£4,087,000).

"This result may, I trust, be regarded as an earnest of what the financial position of these undertakings will be when they are completed throughout. It is thought by some that their present success is due to the shortness of the sections now open, and to their vicinity to the Presidency towns. But these opinions do not apply so much to passenger as to goods traffic, from which latter source, I venture to think, the greater profits will ultimately be derived. At present, the conveyance of merchandise is very limited, and it cannot be expected that the traffic will be properly developed until a greater extent of line is open, but it will have been observed, by the tables given above, that the receipts from goods are already greater than from passengers; whereas the proportion in 1856 was 55·40 of the latter to 45·60 of the former; last year it was 39 to 61 per cent.

"There are two periods in the history of these undertakings, for the arrival of which the Government as well as the shareholders will look with interest. One, when, after the completion of each undertaking, the half-yearly profits shall exceed the rate of guaranteed interest, and when half such excess will accordingly be added to the 5 per cent. paid to the shareholders. The other, when the whole amount advanced by the Government, for the payment of the guaranteed interest, shall have been paid off, and the shareholders will receive the whole of the net receipts.

"It would be premature now to attempt to calculate when these events are likely to occur. In the meantime, however, there is sufficient ground for looking forward to the realisation of Lord Dalhousie's prediction, that 'the Government will never be called upon, after a line shall have been in full operation, to pay the interest guaranteed upon the capital; ' in other words, that a line, when completed and in full work, will realise a steady profit of 5 per cent. As this state of things must, however, depend upon various circumstances, it may be worth while to

examine whether the hope may be justified by the present aspect of Indian railway projects.

"The success of all railways is of course contingent upon their original cost, upon the manner in which they are managed when completed, upon the trade of the country and the extent and habits of the population of the districts through which they pass, upon the deterioration of the plant and road, and upon the amount of working expenses. And, when applying these conditions to India, it may be possible to arrive at something like a correct estimate of the commercial value of railways in that country.

* * * * *

"The various lines must necessarily differ in their respective results, according to the circumstances of the districts through which they pass, but assuming that the requisite facilities will, in all cases, be afforded for obtaining a ready access to them, and considering that the competition will be avoided, which in this country has been the means not only of exhausting funds at the outset, but of seriously diminishing the amount of profits that had been calculated upon, ample grounds exist for the expectation, that when once the lines are completed and brought into working order, the traffic will be sufficient, not only to cover the guaranteed interest, but to produce a highly remunerative return.

* * * * *

"It is worthy of note how greatly the traffic of the third class preponderates. The proportion of first and second class put together is to the third class as 1 to $16\frac{1}{2}$. This shows, conclusively, how strong has become the desire of the population at large to move about, when the means of doing so has been provided. If railways have produced this result with a people usually regarded as inactive and stationary, it may reasonably be expected that an impulse will be given to the already expanding trade of India,* the advantages of which will be felt equally in this country as in India.

"It may be interesting, as an example, to examine the effect which they will probably have upon the great staple of our manufacturing districts. It appears * * * that the average amount of cotton supplied per annum to the United Kingdom, by India, during the ten years ending 1858, was 146 million pounds, or about 18 per cent. of the total imported into the former. America supplies $75\frac{1}{2}$ per cent. of the remainder. Of the Indian portion, Bombay sends 135 million pounds, Madras $9\frac{1}{2}$ millions, and Bengal $1\frac{1}{2}$ million. By far the greater quantity, therefore, comes from Bombay. The cotton fields of Berar and Surat will soon be penetrated by the Great Indian Peninsula and the Bombay and Baroda Railways. Hitherto the cotton from the former district has been carried to the port of Bombay, a distance of

* In 1848, the number of European vessels which entered Indian ports was 1927; in 1858, 4261.

In 1848, the value of exports was 14,738,435*l.*, and of imports 10,571,008*l.*; total, 25,309,443*l.*

In 1858, the exports were 28,278,474*l.*; the imports were 31,093,065*l.*; total, 59,371,539*l.* (inclusive of treasure over £16,000,000).

450 or 500 miles, on the backs of bullocks or in country carts ; from the latter it has been conveyed in small coasting vessels. The system of packing and cleaning it has been very imperfect, and upon reaching Bombay it is found frequently, after a journey of six or eight weeks, to have deteriorated in quality and to have diminished in quantity. It has been estimated that the expense of conveying it from Berar amounts to $1\frac{1}{2}d.$ per lb., but it is often much higher. This addition to its cost, and its present inferiority to American cotton, prevents the grower from realising an adequate profit, except when America fails to send the necessary supply to England. It is the opinion of competent judges that the growth of cotton in Berar may be increased to an almost unlimited extent, and that, with care and attention, its quality may be improved. When railways afford a safe and expeditious means of conveyance, and enable it (as the present rates would do) to be delivered at Bombay at more than a penny a pound cheaper than can now be accomplished under the most favourable circumstances, there will be no excuse for inattention to its culture, for the cost of bringing it to the English market would then be so reduced as to enable it to compete, upon more equal terms, with American cotton. In a few words, the result of railway communication will be, the greater supply to this country of a better article at a cheaper rate.

"The same observations are equally applicable to other products, such as sugar, indigo, rice, &c., which are exported from India, as well as to many resources of the country, including wool, flax, fibres, &c., which have hitherto remained comparatively unknown or dormant, principally from the deficiency in the means of conveying them to a seaport. The most important of these resources, the development of which will add more to the material wealth of the country than almost any other product, are coal and iron. For it is possible that, by the use of these essential aids to the working of machinery, India may again become a manufacturing as well as a producing country. In addition to the commercial benefits which are thus likely to arise, it is hardly necessary to allude to the political, military, and social advantages which will result from railways in India. The saving of time alone will be calculated by weeks instead of hours, as in other countries where railways have been introduced. Whether this saving is considered in reference to the movements of troops, the conveyance of passengers, or the carriage of goods, the advantages will be enormous. The ease and security which is derived from railways will also be more sensibly felt in India than in almost any other country. Troops will be moved without fatigue and danger to health, and Government will be enabled to concentrate them at any given point at a few hours' notice ; merchandise will be conveyed without the damage and loss to which it is subject by road or river transit ; and the facilities for personal intercourse, and for the spread of intelligence afforded thereby, will not fail to improve the social condition of the country."

FORM OF DEED OF CONTRACT.

THE following are the provisions contained in the Deeds of Contract between the Government of India and the Railway Companies :—

Selection of line.

1. That it shall be lawful for the Secretary of State in Council to determine, fix upon, and select the route and direction of a line of railway, to commence at or near to , and to proceed to or near , and such selected line of railway, of an estimated cost, to be approved of by the Secretary of State in Council, shall be completed by the said Railway Company, and opened for the conveyance of passengers and goods with all practicable speed.

Notice of line.

2. That the Secretary of State in Council shall give notice to the said Railway Company of the line when so selected as aforesaid, or of any part or parts thereof, as such part or parts shall from time to time be fixed upon ; and it shall be lawful for the Secretary of State in Council, from time to time, to alter the said route or direction, or to extend or limit the same as he shall think fit, after such notice as aforesaid : Provided always, that if such alteration of route or direction shall be made after the said railway shall have been commenced in a previously selected route or direction, the expense of the said railway, or in any way incident to the said alteration, shall be considered as properly incurred by the said Railway Company.

Land.

3. That the Secretary of State in Council shall, after the selection of the route and direction of the said line of railway, or of any part or parts thereof, and from time to time as may be necessary, provide the land which shall be required for the said railway, or for the part or parts thereof so selected, and the works connected therewith, and for proper stations, offices, warehouses, and other conveniences for the same, and shall give to the said Railway Company possession thereof, and that all land of which possession shall be so given to the said Railway Company which shall not be permanently required for the purposes of the said Railway Company shall, as soon as practicable, be restored and delivered up by the said Railway Company to the Government of India for the use of Her Majesty, her heirs and successors, for the purposes of the Government of India.

Works.

4. That the said Railway Company shall, on receiving pos-

session of the same land, or any part thereof, forthwith and subject to the supervision and control hereinafter prescribed, commence and proceed with diligence in the construction of the said line of railway, and of all such stations, offices, warehouses, fixed machinery, and other works and conveniences as in the opinion of the Secretary of State in Council (such opinion to be certified in writing) shall be necessary or expedient as well with reference to the original construction of the said railway, and the working thereof, as with reference to the permanent maintenance thereof, and its protection from injury or destruction by inundation, tempests, or other causes whatsoever ; and such railway shall be made at such gradients, and shall be furnished with rails of such weight and strength, and laid down and secured in such manner, and shall consist either of a single or double line of railway as the Secretary of State shall in writing direct, and shall, if required by the Secretary of State in Council, and at such time or times as they shall in writing require, be provided with an electric telegraph, constructed along all or such part or parts of the said railway, and upon such principle and under such regulations as to its use, and the terms of its use, as the Secretary of State in Council shall in writing direct or approve of ; and the said Railway Company shall, from time to time, attend to execute and perform all such directions in writing as may from time to time be given by the Secretary of State in Council for any deviations from or alterations in any directions or requisitions previously made or given with respect to the premises. And the said Railway Company shall, as soon as the said railway shall be completed for such a distance as in the opinion of the Secretary of State in Council shall be desirable, open the same for the conveyance of passengers and goods.

Line to be commenced on possession of land being given.

Secretary of State to approve of the works to be undertaken.

Electric telegraph to be provided.

Partial openings may be ordered.

5. That it shall be lawful for the Secretary of State in Council, from time to time, by notice to the said Railway Company, to require any specified part or parts of the said line of railway to be completed as aforesaid, and to be opened for the conveyance of passengers and goods before the remaining part or parts thereof shall be constructed, and such requisitions shall be complied with and fulfilled by the said Railway Company.

6. That the said Railway Company shall pay into the Bank of England, to the account of the Secretary of State in Council of India, the sum of not less than , which, with the sum of , will make up in all the sum of sterling, by such instalments and at such times as the Secretary of State in Council may require, and such payments may be made in sums of not less than

and such payments may be made in sums of not less than each, in London, provided that if the said Railway Company shall receive any portions of the capital already subscribed, or hereafter to be subscribed, in India, it shall be lawful for

them to pay the amount so received in sums of not less than rupees into the treasury at , in or towards satisfaction of the said instalments, and the acknowledgments of such respective payments there shall, when produced to the Secretary of State in Council in London, be considered and taken in part satisfaction as on the days of payment thereof respectively of the said sum of , at the exchange of 1s. 10d. for each Company's rupee : Provided always, that such payments into the treasury at shall not exceed the amounts which may from time to time be required for expenditure in India, such limit being determined upon by the Secretary of State in Council.

Rupee value
fixed at 1s. 10d.
sterling.

Draft on capi-
tal.

Sanction of
Secretary of
State required.

Ten days' no-
tice necessary.

Plant, fares,
and tolls.

Working stock
to be provided.

7. That as often as, and when any money shall be required by the said Railway Company for any purposes in connection with the said line of railway, sanctioned by the Secretary of State in Council, and with reference to the particular sums from time to time required, only so far as such purposes shall have been performed to the satisfaction of the Secretary of State in Council, or when any money shall be required for the performance of works in connection with the said line of railway, sanctioned by the Secretary of State in Council, while the same shall be in course of execution, the same may be drawn in such sums as shall, from time to time, be necessary, by the said Railway Company in London or in India, according to such arrangements as shall be made from time to time with the Secretary of State in Council for that purpose ; but ten days' notice of every such draft, or proposed draft, shall be given to the Secretary of State in Council, or to the Government of India, or to such Lieutenant Governor or such authority as the said Government of India may direct ; and all sums of money which shall be so drawn at shall be set off at the exchange of 1s. 10d. for each Company's rupee against the said sum of sterling, or so much thereof as shall have been paid into the Bank of England to the account of the Secretary of State in Council as aforesaid ; and the said Railway Company shall not in any case be entitled to draw in London or in India to an extent greater than the balance in their favour for the time being in respect of the capital raised for the said line of Railway.

8. That when and so soon as the said line of railway, or any part or parts thereof which shall have been required by the Secretary of State in Council to be completed before the construction of the other parts, shall be completed and ready to be opened for the use of the public, and so, from time to time, as any such part thereof shall be so completed and ready to be opened, the said Railway Company shall and will, subject to the supervision and control hereinafter mentioned, provide to the satisfaction of the Secretary of State in Council a good and sufficient working stock of engines, carriages, and other plant

and machinery for working the said railway, or such part or parts thereof as shall have been completed as aforesaid, and Traffic to be carrying on the business and traffic of the same, and the said carried on. Railway Company shall and will forthwith commence and carry on the business of common carriers of goods and passengers Trains and upon the said railway, and for that purpose shall cause to be speed to be run on the said railway so many trains at such times, and at settled by such rates of speed, and between such places, and with such Secretary of conveniences and accommodations, as the Secretary of State in State. Council shall from time to time require. And the said Railway Fares and tolls Company shall and will allow the use of the said railway to the to be approved public on such terms as shall be approved by the Secretary of by Secretary of State; State in Council ; and the said Railway Company shall be au- thorised and empowered to charge such fares for the carriage of passengers and goods, and such tolls for the use of the said railway as shall have been approved by the said Secretary of may be reduced State in Council, and shall not in any case charge any higher or when 10 per different fares or tolls whatsoever without such approval being cent. profit on first obtained ; but such fares or tolls shall, when such net the outlay in receipts as are herein-after mentioned shall in any year have any one year exceeded ten per ccnt. upon the outlay, be reduced in accordance shall have been realised, but with any requisition of the Secretary of State in Council only to prevent in that behalf, but only with a view of limiting the said fares 10 per cent. and tolls so far that the net receipts shall not exceed ten per being exceeded. cent. as aforesaid.

9. That upon the completion of the said line of railway, or Title to land. of any part or parts thereof which shall have been required by the Secretary of State in Council to be completed before the construction of the remaining part, the Secretary of State in Council shall and will grant to the said Railway Company a lease of or otherwise secure to them a right and title to the land which shall have been provided under the provisions in these presents contained, or of so much thereof as shall be required for the completed line, and for the works and conveniences thereto belonging for a term of ninety-nine ycars, commencing from the day of the date of these presents, unless the same shall be sooner determined under the provisions herein contained, and the Secretary of State in Council shall guarantee to the said Railway Company the quiet and undisturbed pos- session of such land, but shall not be called upon to show any title thereto.

Land granted
for 99 years
from the date
of contract.

10. That the said Railway Company and their officers, ser- Supervision ; vants, and agents, as also their accounts and affairs, shall in all Government things be subject to the superintendence and control of the Director may Secretary of State in Council, as well in England as else- be appointed ; where, and in particular that no bye-laws, contracts, his powers and privileges. orders, directions, proceedings, works or undertakings, acts, matters, or things whatsoever shall be made, done, en- tered into, commenced, or prosecuted by or on the part

Secretary of State to possess the right to superintend, control, and direct.

Books to be kept.

Free access to be allowed to Secretary of State, or his nominee, to all books, accounts, papers, and documents, save certain legal communications, and to make extracts.

Government Director to be appointed, with the right of veto :

of the said Railway Company, unless previously sanctioned in writing by the Secretary of State in Council, or in some other manner to be prescribed by them, and that no monies shall be raised by the said Railway Company by any other means than by calls upon or payments in respect of the shares in the same Company, without the sanction of the Secretary of State in Council in writing, and no extension in the number of shares in the said Railway Company or in the amount of its capital shall be made, unless sanctioned in like manner ; and that it shall be lawful for the Secretary of State in Council, from time to time, to give to the said Railway Company, their officers, servants, and agents, all such orders and directions as the Secretary of State in Council shall from time to time think fit, with reference to the railway and works to which this present contract relates, and with reference to the manner and times of executing the same, and with reference to any contracts, orders, and directions to be entered into, made, or given with regard thereto, and otherwise with reference to the same, all which contracts, orders, and directions shall be executed and followed by the said Railway Company, to the satisfaction of the Secretary of State in Council, the costs and expenses of the same, which shall have been allowed and sanctioned by the Secretary of State in Council, being paid out of the capital of the said Railway Company, raised for the purposes of this present contract : And that for better enabling the Secretary of State in Council to exercise the control and direction intended to be hereby secured, the said Railway Company shall record and keep in proper books for that purpose full and particular accounts of all their transactions and proceedings, including full and true minutes of all their meetings, meetings of Directors, communications with India, and correspondence, so as at all times to exhibit thereby fully and truly the state of their affairs and proceedings ; and that the Secretary of State in Council, and any person or persons appointed by him in that behalf, shall at all reasonable times have free access to all the books, accounts, papers, and documents of the said Railway Company (except communications between the said Railway Company and their legal advisers), and power to make copies of or extracts from the same, whether such books, accounts, papers, and documents relate to the said railway and works, or to any other matters and things whatsoever in which the said Railway Company shall or may be interested ; and for the purposes aforesaid it shall be lawful for the Secretary of State in Council, from time to time, to appoint any one person, not being a shareholder in the said Railway Company, to be a Director of the said Railway Company, to be called the Government Director, which Director, if and when appointed, shall rank as and be one of the Board of Directors of the said

Company, and be entitled in all things to act as such, and to exercise at his discretion a right of veto in all proceedings whatsoever at Boards of the said Directors, except proceedings for the purpose of communicating with the legal advisers of the Company, and shall not be removable except by order of the Secretary of State in Council, and shall, in case the whole number of Directors shall at the time of his appointment be filled up, come and be in the place of the Director who shall retire from the direction according to the decision of the Board, such decision being taken by ballot, but such Government Director shall not be entitled to any salary from the said Railway Company: Provided always, that nothing herein-before contained shall authorise the Secretary of State in Council to appoint any officer or servants of the said Railway Company, except such Government Director as aforesaid.

11. That all the expenses of the said railway, in respect of the said line of railway, shall from time to time be stated and submitted to the Secretary of State in Council, for his sanction and approval, and as between the said Railway Company and the Secretary of State in Council, shall be allowed so far only as the same shall from time to time have been sanctioned and approved by the Secretary of State in Council: Provided always, that the last-mentioned stipulation shall not interfere with any such subsidiary agreement or agreements (if any) as from time to time may be made between the said Railway Company and the Secretary of State in Council, for the performance of any part or parts of the said railway and works, at any sum or sums of money to be specified in such subsidiary agreement or agreements, in which case the expenses in respect of the same shall be allowed and taken at the sum or sums which shall be so agreed upon.

12. That a capital account relating to the construction of the said line of railway, and the works, conveniences, and telegraphs thereto belonging, and relating to the original cost of engines, carriages, plant, and machinery provided for the purposes of the said line, to be called "The Capital Account," shall be kept by the said Railway Company, to which account all monies paid by the said Railway Company, the expenditure of which shall have received the sanction and approval of the Secretary of State in Council, shall from time to time be carried, and when and so soon as the said railway and works shall have been completed, and furnished with the necessary rolling stock and plant, or at any earlier time or times, if the Secretary of State in Council shall require the same, the said capital account shall be made up, and a statement shall be furnished to the Secretary of State in Council of the aggregate amount of capital, which, according to such account, shall have been expended, and such amount

to sit at the
Board, but not
be paid.

Sanction of
expenditure by
Secretary of
State necessary.

Capital ac-
count to con-
tain all the
sums expended
with the ap-
proval of the
Secretary of
State.

When railway
is completed
and properly
furnished with
rolling stock
and plant, or
sooner, if re-
quired, the

capital account to be closed, and its total, if on examination found correct, to be certified.

Revenue to be charged with all costs of working and maintaining line and stock.

Capital account may be re-opened for certain defined purposes with the sanction of Secretary of State.

Repair and maintenance of rolling stock ;

to be kept in good repair, so as, during the whole 99 years, to be adequate to the service.

Revenue account to be made up 30th June, and 31st December, in each year.

Secretary of State at liberty to make corrections "in all times."

Deposit of revenue and drafts thereon.

Revenue to be paid into and drawn from the Indian Treasury, with the

shall, by examination of such account, be ascertained and certified by the Secretary of State in Council, and thenceforth and from the opening of the said line of railway or any part thereof, the cost of maintaining it, with its machinery and stock in good working condition, shall be payable by the said Railway Company out of the revenue of the said railway, including any interest to be received from the Secretary of State in Council, as herein-after is mentioned ; but upon any additions, alterations, or improvements, such as shall properly be chargeable to the capital account, being thereafter made, with the sanction and approval of the Secretary of State in Council, to, of, or in the said railway, or the works, conveniences, or telegraphs thereto belonging, or the engines, carriages, and other plant and machinery belonging thereto, the cost necessarily incurred in executing such additions, alterations, or improvements shall be added to the said capital account, and the said capital account shall from time to time be made up and stated afresh as occasion shall require, and be ascertained and certified accordingly.

13. That at all times during the said determinable term of 99 years the said Railway Company shall keep the said railway, or so much thereof as shall be completed and opened for traffic, and the works and conveniences belonging thereto, and the telegraphs on the said railway (if any) in a state of good repair, and in good working condition, to the satisfaction of the Secretary of State in Council, and shall keep the same fully provided with rolling stock and plant adequate to the service thereof to the satisfaction of the Secretary of State in Council.

14. That the said Railway Company shall, in such forms and under such heads or divisions as shall be prescribed by the Secretary of State in Council, keep accounts of all receipts and payments whatsoever in respect of the said line of railway (other than such receipts and payments as properly belonging to the capital account herein-before agreed to be kept), and such accounts shall be called the "Revenue Accounts," and shall be made up half-yearly to the 30th day of June and the 31st day of December in every year, or to such other days in the year as the Secretary of State in Council shall appoint, and shall be regularly transmitted to the Secretary of State in Council, who shall be at liberty in all times, in auditing the same accounts, to make any corrections therein which may be necessary.

15. That all the earnings of the said railway, received by or on account of the said Railway Company in India, shall be paid at such times and in such manner as the Secretary of State in Council shall direct, without any deduction under any pretence whatever, into the Treasury of the Government of India at , to an account to be kept separately, to be called "The Revenue Account," and when

any money shall be required by the said Railway Company for sanction of the any purposes in connection with the said railway, sanctioned Secretary of State in Council, such money may be drawn by the said Railway Company according to such arrangements as shall from time to time be made with the Secretary of State in Council for that purpose.

16. The Secretary of State in Council shall, from time to time during the determinable term of 99 years, pay out of the revenues of India to the said Railway Company in London, half-yearly, on the 30th day of June and the 31st day of December in every year, interest at the rate of per cent. with the payment of the annum on the said sum of sterling, or on such parts thereof as shall for the time being have been paid into the Bank of England, to the account of the Secretary of State in Council, or into a treasury in India, as aforesaid, such interest upon any part of the said sum of being considered, in the first instance, as running from the day on which the same part shall have been so paid into the Bank of England to such account.

17. That if the expenditure of the said Railway Company in excess above making the said railway and works, or otherwise in respect of the matters to be included in the said capital account, shall exceed the said sum of , the money necessary to meet such excess shall be raised and paid by the said Railway Company into the Bank of England, to the account of the Secretary of State in Council, and the Secretary of State in Council shall, from time to time, during the residue of the said determinable term of 99 years, pay out of the revenues of India to the said Railway Company, half-yearly, on the days aforesaid, interest at the rate of per cent. per annum, such interest on the same monies to be calculated from the respective times when they shall have been so paid into the Bank of England as aforesaid.

18. That so soon as the said Railway Company shall begin to work the said line of railway, or any part thereof, and profits. henceforth during the said determinable term of 99 years, the net receipts which shall be realised during any half-year, or from the commencement up to the first of the aforesaid half-yearly days on the said line of railway, or on any part thereof, after deducting therefrom all sums which shall have been expended in the repairs and maintenance of the said line of railway and works, and the repair and restoration of the rolling stock and plant belonging thereto, or have been duly apportioned to the account of the said line of railway for expenses of management and conduct of the said Railway Company and its affairs, and which shall have been allowed or sanctioned by the Secretary of State in Council, and also deducting such sum (if any) as, with the consent of the Secretary of State in Council, may be appropriated and set aside, the depreciation fund may be established, and if so, to

be invested till required to make good deterioration;

remainder of net profits to go, so far as they will, to meet the guarantee.

Net profits chargeable with guarantee and with repayment of interest debt.

The residue of net profits to go in equal portions—one to the Government to liquidate the interest debt made up of the interest paid on the capital with simple interest added—the other moiety to go to the Company.

When the interest debt has been met, all profits to belong to Company.

Mails and troops to be conveyed

apart for repairing, restoring, and making good any deterioration of the railway and works or stock and plant, and for the current expenses of working the said railway (the money to be so appropriated and set apart as a reserve fund, or any part thereof being invested and accumulated or otherwise dealt with, till required for application in any manner the said Railway Company may think fit, subject to the sanction and approval of the Secretary of State in Council), shall be applied, in the first instance, in or towards discharge of the interest, which shall be payable by the Secretary of State in Council under their covenants in this indenture contained, in respect of the said half-year, so as to exonerate the Secretary of State in Council, so far as the same net receipts will extend, from the payment of such interest, the money to be so applied being reckoned at the fixed and permanent exchange of 1s. 10d. per Company's rupee, and the residue (if any) of such net receipts shall be applied in manner following, that is to say one moiety thereof shall be forthwith applied in the repayment of such sums of money as shall at any previous time or times have been paid by the Secretary of State in Council to the said Railway Company under the covenants in this indenture contained, by way of interest as aforesaid, together with simple interest on such sums of money at the rate of per cent. per annum from the times of payment respectively, and such moiety shall be paid into the Treasury of the Government at , and shall be reckoned at the said rate of exchange, and shall be applied in reduction and discharge of the whole of the interest payable to the Secretary of State in Council on the said sums of money, before the same shall be applied in liquidation of any part of the principal thereof, and the other moiety of the said surplus net receipts shall be paid to or applied for the use and benefit of the said Railway Company; and if, at any time during the determinable term of 99 years, the whole of the monies previously paid by the Secretary of State in Council as aforesaid, with interest thereon as aforesaid, shall have been repaid and discharged, then for every half-year during such time, and so often as the same shall happen, the said Railway Company shall be entitled, for their own use and benefit, to the entirety of the said surplus net receipts, or, as the case may be, so much thereof as may remain after such repayment and discharge as last aforesaid, shall have been made.

19. That the said Railway Company will at all times during the said determinable term convey on the said railway the Government mails and post bags, and the guards and other servants of the Post Office in charge thereof, free of charge; and when they are on duty, all officers and persons in the administration of the Post Office also free of charge, and will also convey on the said railway, when they are on duty, the

troops in Her Majesty's service, both horse and foot, and all other persons to whom the provisions of the Mutiny Acts and Regulations for the time being in force for Her Majesty's European and Indian forces respectively shall be applicable, and all artisans on the business of the Government; the officers in superior and persons of similar station in life to be entitled to travel in carriages at first-class carriages at second-class fares, and the troops and European artisans in second-class carriages at the lowest fares, and all other persons at the lowest fares, with two tons of baggage for every hundred men, free of charge, and will also convey on the said railway all general stores belonging to the Government, and all guns, ammunition, horses, and other war materials, animals used for military purposes, and all military stores, carriages, waggons, camp equipage and equipments whatsoever, at the lowest rate, for the time being, chargeable for the carriage of such animals, goods, and merchandise, the several privileges of conveyance and carriage hereby stipulated for, being at all times to be used and enjoyed in preference to and priority over the public use of the said line of railway for conveyance and carriage.

20. That at the end of the said term of 99 years, by Ultimate rights effluxion of time, the land to be provided as aforesaid, with the property of railway thereon, and all buildings, works, fixed machinery, telegraphs, and conveniences whatsoever, shall revert to and become the property of Her Majesty, her heirs and successors, for the purposes of the Government of India, free from all debts and charges whatsoever (save such as shall have been sanctioned by the Secretary of State in Council), and any lands in Great Britain which may then be held by the said Railway Company for the purposes of the undertaking to which this contract relates shall be sold, and the clear monies produced by any such sale shall be paid into the Bank of England to the account of the Secretary of State in Council, and the said Railway Company shall deliver to the Secretary of State in Council their property on the same account, all plans, surveys, sections, books, printings, writings, drawings, and documents whatsoever in anywise connected with the undertaking and affairs of the said Railway Company, so far as respects the said line of railway. And the said Railway Company shall sell, and the Secretary of State in Council, on behalf of Her Majesty and for the purposes of the Government of India, shall purchase, all the engines, carriages, stock, machinery, and plant which shall be then used in working the said railway, or otherwise in connection therewith, or belonging thereto, for such sum of money as shall be the fair value thereof, the same to be determined in case of difference by a valuation, to be made by referees or their umpire, to be respectively appointed in the usual manner. And the Secretary of State in Council shall pay out of the revenues of India to the said Railway Company The value of same to be paid

also stores and
&c., at the
lowest rates
charged.

Lands in Great
Britain to be
sold.

All plans, &c.,
to be given up.
Engines, car-
riages, &c., to
be purchased
and paid for by
the Govern-
ment by valua-
tion.

The value of
same to be paid

to Railway Company.

Surrender.

After line has been in work for three months, Company at liberty to surrender same on giving six months' notice.

Line to be then surrendered, and Company to wind up its affairs.

Company to deliver up engines, carriages, &c. to the Government, also all plans, &c.

The railway and all the plant to be in good working order.

Capital to be then repaid.

Company to be discharged from all liabilities.

Government no longer to be responsible for

in London the sum of money to be so determined within four months after such determination, with interest thereon at the rate of five per cent. per annum, from the expiration of the said term of 99 years.

21. That after any portion of the said line of railway shall have been finished and in work for three calendar months at least, it shall be lawful for the said Railway Company then or at any time thereafter during the said term of 99 years, to give notice in writing of their intention to surrender and relinquish the said railway and works on any day to be mentioned in such notice, so that such notice be served at least six calendar months before that day, both on the Secretary of State in Council in London, and also on the Secretary of Government at ; and in case of such notice being given, the said Railway Company shall, at the expiration thereof, surrender and relinquish to Her Majesty, for the purposes of the Government of India, the said line of railway and works accordingly, together with the telegraphs (if any), and shall, with all convenient speed, sell any lands in Great Britain which may then be held by the said Railway Company for the purpose of the undertaking to which this contract relates, and pay the clear monies to be produced by such sale into the Bank of England, to the account of the Secretary of State in Council of India ; and shall deliver to the Government, or their authorised agents on behalf of Her Majesty, for the purposes of the Government of India, the engines, carriages, stock, plant, and machinery belonging to the said line of railway and works, and all plans, surveys, sections, printings, writings, drawings, and documents whatsoever connected therewith, and the premises to be so surrendered and delivered, shall be accepted and received accordingly, it being expressly agreed that the said line of railway, works, stations, telegraphs, engines, carriages, stock, plant, and machinery shall, at the time of such surrender and delivery, be in good working order, according to the covenant in that behalf herein-before contained on the part of the said Railway Company ; and immediately upon such surrender and delivery being made, the Secretary of State in Council shall be bound to pay out of the revenues of India to the said Railway Company the capital expended by the said Railway Company upon the said railway, works, and premises so to be surrendered and delivered, such expended capital being ascertained and certified in the manner herein-before mentioned, together with such parts (if any) of the capital raised for the purposes of this contract as shall remain in the Bank of England, to the account of the Secretary of State in Council, and to discharge and indemnify the said Railway Company from all debts and liabilities incurred with the sanction of the Secretary of State in Council in respect of the said line of railway ; and thereupon the covenants herein-before contained for pay-

ment of interest shall cease as from the day upon which the payment of said line of railway and works are to be surrendered and interest accepted ; and all claims by the Secretary of State in Council, on account of interest on the said Railway Company in respect of the said line of railway, shall also cease, and the Secretary of State in Council shall be at liberty to retain out of any monies payable to the said Railway Company, the amount of all claims and demands of any sort then existing against the said Railway Company on their revenue account, in respect of their said railway, and which shall not be shown to have been fully satisfied and discharged : Provided always, that the Secretary of State in Council shall not be liable to refund any sum expended in the maintenance or working of the said line of railway, or any part thereof, after the same shall have been opened, which sum is to be provided by the Railway Company out of the revenues of the line, and interest, as herein-before provided, or otherwise.

22. That at any time within six calendar months after the expiration of the first twenty-five years of the said term of 99 years, or at any time within six calendar months after the expiration of the first fifty years of the same term, it shall be lawful for the Secretary of State in Council to give notice to the said Railway Company in London and at their intention to purchase, on behalf of Her Majesty, for the purposes of the Government of India, the said railway and works, together with the stations and telegraphs (if any), and the engines, carriages, stock, plant, and machinery belonging to the said railway and works, but subject to such debts and liabilities (if any) as may have been incurred to Her Majesty, or to the Secretary of State in Council (exclusive of any arrears of the interest on the capital of the said Railway Company paid by the Secretary of State in Council, under the conditions of this agreement, which shall not have been repaid), or to any person or persons with the sanction of the Secretary of State in Council, and to interest on such of the said debts as carry interest from the day on which possession shall be taken of the said railway, but not from any earlier time ; and thereupon, at the half-yearly day next but one following such notice, the land to be provided as aforesaid, with the railway thereon, and all buildings, works, fixed machinery, stations, telegraphs, and conveniences whatsoever connected therewith, shall revert to and become the property of Her Majesty, for the purposes of the Government of India ; and in case any lands in Great Britain shall then be held by the said Railway Company for the purpose of the undertaking to which this contract relates, the same shall be sold, and the clear monies to be produced by such sale shall be paid into the Bank of England to the account of the Secretary of State in Council of India ; and the said Railway Company shall at the same time deliver to the Government, Engines, car-

Railway Company to be released from the interest debt, but to be liable for revenue debts.

Revenue and interest fund to be held chargeable with costs of working and maintaining the railway.

Purchase by Government.

of Notice of intention to be given within six months after the first 25 or 50 years of lease have expired ;

subject to payment of debts by Company, the interest debt excluded.

Possession to be taken at time named.

Lands in Great Britain to be sold.

Engines, car-

riages, &c., to be or their authorised agents, on behalf of Her Majesty, for the delivered over.

Government bound to pay to the Company for their capital the mean market value the stock bore in London for three years prior to purchase.

Possession as a remedy.

If Company make default in their covenants, or do not work railway to the satisfaction of Secretary of State, possession may be taken on notice by Government.

All matters and things to be given up.

Lands in Great Britain to be sold.

purpose of the Government of India, the engines, carriages, stock, plant, and machinery belonging to the said line of railway and works, and all plans, surveys, sections, books, printings, drawings, writings, and documents whatsoever in anywise relating thereto ; and the Secretary of State in Council shall be bound to pay in London, out of the revenues of India, on the said half-yearly day, for the purchase of all the same premises, a sum equal to the amount of the value of all the shares and capital stock in the said Railway Company issued or created for the purposes of the said Railway, calculated according to the mean market value in London of such shares or stock, during the three years immediately preceding the expiration of the said period of twenty-five years, or the said period of fifty years, as the case may be, and shall also be bound to indemnify the said Railway Company against all such debts and liabilities (if any) as they may have incurred, to or with the sanction of the Secretary of State in Council, in respect of the said line of railway, and as shall be then subsisting, and thereupon the covenants herein-before contained for payment of interest shall cease.

23. That if default shall be made by the said Railway Company in the raising and payment of the said sum of , or any of the instalments thereof, or of such further capital as shall be required for the construction of the said railway, or in the due application of any monies drawn in London or in India as aforesaid, or in the execution of the said railway and works, conformably with the covenants in that behalf herein-before contained, or in case the said railway shall not be worked to the satisfaction of the Secretary of State in Council, or in case of any other breach on the part of the said Railway Company of any of the covenants herein contained, it shall be lawful for the Secretary of State in Council, on giving to the said Railway Company at three calendar months' notice of their intention in that behalf, to terminate the interest of the said Railway Company in the said land, railway, telegraphs, and works to be taken or constructed under these presents, and by their agents to assume on behalf of Her Majesty, for the purposes of the Government of India, possession of the land, railway, telegraphs, and works, and of all or any of the engines, carriages, stock, plant, and machinery provided for the same or belonging thereto ; and all plans, surveys, books, printings, drawings, writings, and documents whatsoever in anywise connected with the said line of railway, and in that case any lands in Great Britain which may then be held by the said Railway Company for the purpose of the undertaking to which this contract relates shall, with all convenient speed, be sold, and the clear monies to be produced by such sale shall be paid into the Bank of England, to the account of the Secretary of State in Council. And

in case of such notice being given, the Secretary of State in Council shall be liable to repay, out of the revenues of India, within six calendar months after its expiration, to the said Railway Company in London, the capital expended by the said Railway Company upon the said railway and works, so ascertained and certified as herein-after is mentioned, after a proper deduction for all debts and liabilities then affecting the said Railway Company, in respect of the said line of railway, the money so to be repaid to include so much (if any) of the capital raised for the purposes of the said line of railway as shall then remain in the Bank of England, to the account of the Secretary of State in Council, and also to discharge, exonerate, and indemnify the said Railway Company from all debts, obligations, and liabilities for works and expenditure undertaken, with the sanction of the Secretary of State in Council, in respect of the said line of railway, and thereupon the covenants of the Secretary of State in Council in this indenture contained for payment of interest shall cease, and all claims by the Secretary of State in Council on the said Railway Company, in respect of the said line of railway, shall also cease, the intention of the parties hereto being that the said Railway Company shall, under all circumstances, receive back their capital expended with such sanction as aforesaid, and that such re-entry and assumption of possession, and the exercise by the Secretary of State in Council of the powers and authorities by this clause given to them, shall be the only penalty to which the said Railway Company shall be liable in case of default in raising sufficient capital for the purposes of the said line of railway, or in constructing and working the said railway to the satisfaction of the Secretary of State in Council.

24. That if default shall be made by the Railway Company, after the said line of railway, or any portion thereof, shall have been opened, in their covenant to keep the said line of railway and works, or such part thereof as shall have been completed and opened for traffic, in repair and condition for the space of one calendar month next after notice in writing in that behalf from the Secretary of State in Council to the said Railway Company at , it shall be lawful for the Secretary of State in Council, by their agents, to enter on the said line of railway and works, and to do and execute all such works as may be required for fulfilling the said covenant, and to charge the expenses of the same against the said Railway Company, by setting off the amount of such expenses against any monies then payable, or which shall thereafter become payable by the Secretary of State in Council for interest in manner herein-before mentioned, which interest shall, in such case, to that extent, be considered as paid and satisfied by such set-off or retainer: and shall, for all the purposes of these presents, be regarded and considered as interest actually paid by the Secretary of State in Council

If not sufficient to meet same, then the Company to be liable otherwise. to the said Railway Company in pursuance of their covenants in that behalf, herein-before contained, and if such expenses shall not be satisfied by such set-off and retainer as aforesaid, then the Secretary of State in Council may set-off and deduct the same against and from all or any part of any other monies which shall on any account whatsoever, under or by virtue of these presents, be or become payable by the Secretary of State in Council to the said Railway Company.

Annuity commutation.

In case of surrender, purchase, or otherwise of the line, Government to be at liberty to pay by annuity in place of a gross money payment.

Annuity to be paid half-yearly, and calculated and determined by average rate of interest on India securities held in London the two preceding years.

Same to be determined by Governor and Deputy Governor of Bank of England; right not to apply to certain capital.

Return of surplus.

Capital in excess of requirements to be repaid with interest, and to be cancelled.

25. That in every or any case in which, under the provisions of these presents, the Secretary of State in Council shall, before the expiration of the said term of 99 years, become bound to repay the capital expended by the said Railway Company upon the said line of railway and works as aforesaid, or to pay for the purchase of the said line of railway, works, and stock, it shall be lawful for the Secretary of State in Council, instead of paying a gross sum of money in respect of the premises, to declare by notice to the said Railway Company in London their option to pay an annuity, to be reckoned from the time when the gross amount would be payable, and to continue during the residue of the said term of 99 years; and in that case such an annuity shall be payable in London on such two half-yearly days in the year as shall be selected by the Secretary of State in Council in that behalf, with a fractional part for any broken half year, the rate of interest which shall be used in calculating such annuity being determined by the average rate of interest during the preceding two years received in London upon public obligations of the East India Company, and other public obligations in London, by the Secretary of State in Council, and which shall be ascertained by reference to the Governor and Deputy Governor of the Bank of England for the time being: Provided always, that the aforesaid option shall not apply to the undrawn portion (if any) of the capital of the said Railway Company, raised for the purposes of the said line of railway, which portion is to be repaid to the said Railway Company, with interest, under the provisions in that behalf herein-before contained, in case the said Railway Company shall relinquish or be deprived of the said railway and works as aforesaid.

26. That if after the said railway and works, including the telegraphs, if required, shall have been completed and furnished with adequate working stock, the whole of the capital raised by the said Railway Company for the said line of railway shall not have been required for the purpose of the said capital account, the surplus therefore shall, to the extent to which the same shall have been paid into the Bank of England to the account of the Secretary of State in Council, be refunded to the said Railway Company in London, with such interest as shall be due on such capital at the time, and thereupon the aforesaid covenants for payment of interest shall no longer apply to the capital which shall have been so refunded.

27. That any notice, direction, approval, or sanction to be Sanction of the given or signified on the part of the Secretary of State in Council, Secretary of State in Council, for any of the purposes of these presents, shall be sufficient and binding, if signed by the Secretary of State for India, or one of his Under Secretaries, or by the Secretary of Government at

, or by any other officer or servant duly authorised to act on behalf of the Secretary of State in Council, in respect to the matters to which the same shall relate, and the Secretary of State in Council shall not in any case be bound in respect of To be binding matters aforesaid, unless by some writing signed in the manner must be in writing. before mentioned.

28. That the said Railway Company shall keep an office of Railway office the said Railway Company at all times hereafter during the said in—and agent.

term, established at , or any such other place or places as shall be agreed upon between the Secretary of State in Council and the said Railway Company ; and the said Railway Agent to be the Company shall keep at the said office an authorised agent, or responsible authorised agents, with whom the Secretary of State in Council and the Government at may communicate on affairs concerning the said railway ; and all drafts drawn by the said agent or agents, and all receipts of and acts done by such agent or agents on behalf of the said Railway Company, or concerning the said railway and works, and the affairs thereof, shall be binding on the said Railway Company ; and every notice to be given to the said Railway Company shall be sufficiently given if left at the said office or personally served on such agent or agents.

29. That the Secretary of State in Council shall promote the Legislation in passing by the Governor-General of India in Council of any India. Act or Acts which shall be necessary or convenient for enabling the said Railway Company to fulfil in India the objects of their undertaking according to the terms and provisions of these presents.

30. That none of the covenants, terms, and provisions of these said presents shall have any operation upon the provisions contained in the said indenture of the

, and that none of the covenants, terms, and provisions of the said indenture shall have any operation upon the provisions of these presents, or shall extend or apply to the said railway and works hereby contracted for. In witness whereof, &c.

INDUS STEAM FLOTILLA CONTRACT.

THIS Contract is made between the India Council and the Directors of the Scinde Railway Company ; of which undertaking, under the title of "Indus Steam Flotilla," it forms the connecting means between the railway at Kotree by the Indus to the Punjab terminus at Moultan.

As the Contract in all its essential points is the same as that with the Railway Companies, "Indus Steam Flotilla" being read instead of "Railway," it is proposed to limit the extracts to Clauses 17 and 18, which do differ.

Application of net receipts.

Repairs and maintenance to be paid out of net profits,

also other allowed charges.

Insurance and Contingency Fund to be provided.

Ten per cent. on capital cost to be so reserved.

Same to make good unforeseen damages to flotilla.—Approval of Secretary of State necessary.

"17. That as soon as the said steam-boats and other vessels, or any of them, shall begin to ply on the river Indus, or the said works and conveniences shall begin to be used, and thenceforth, during the said determinable term of ninety-nine years, the net receipts which shall be realised during any half-year or from the commencement up to the first of the aforesaid half-yearly days, after deducting therefrom all sums which shall have been expended in the repairs and maintenance of such steam-boats and other vessels, and of the said works and conveniences, or have been duly apportioned to the account of the said Indus Steam Flotilla for the management and conduct of the said Railway Company and its affairs, and which shall have been allowed or sanctioned by the Secretary of State in Council, shall be in the first place applied in or towards forming two funds, to be called the Insurance and Contingency Fund, and the Depreciation Fund, respectively in manner following, that is to say, on each of the said half-yearly days in every year there shall be reserved out of the net receipts of the half-year ending with that day, and to be set apart to the credit of the Insurance and Contingency Fund, a sum equal to Ten pounds per cent. of the capital expended on the said steam-boats and other vessels as appearing by the capital account to be made up and certified as aforesaid, and the monies so reserved and set apart shall, from time to time, be applied under the sanction and with the approval of the Secretary of State in Council in making good all loss and damage to the said flotilla occasioned by any casual or unforeseen events or emergencies, and subject to the formation of such Insurance and Contingency Fund as aforesaid. On each of the said half-yearly days in every year